ORDER NO. GAD8611621C1
A6

Service Manual

Radio Cassette

RX-FD80

(Black)

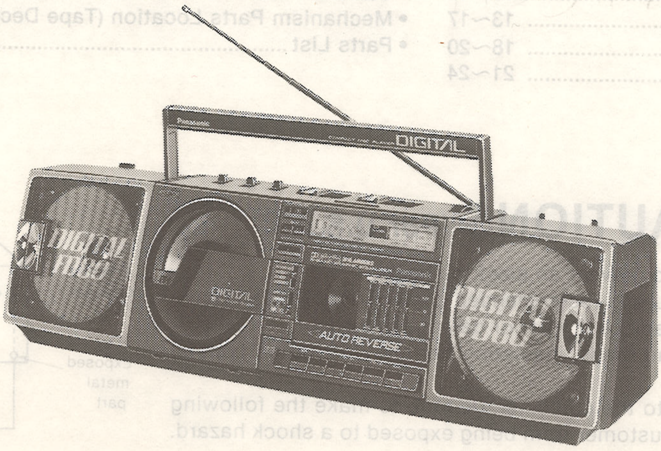
Stereo Radio Cassette Recorder

COMPACT
disc
DIGITAL AUDIO

DIGITAL

This is the Service Manual
for the following area.

M … For U.S.A.



RX-C48 MECHANISM SERIES

■ SPECIFICATIONS

General:

Power Requirement:	AC; 120V, 60Hz Battery; 15V (Ten "D" Size Flashlight Batteries) (Panasonic UM-1 or equivalent)
Power Consumption:	40W (AC only)
Power Output:	22W (11W × 2)...RMS (max.)
Speaker:	Woofer; $5\frac{1}{2}''$ (14cm) PM Dynamic Speaker (2.7Ω) Tweeter; $\frac{7}{8}''$ (2.2cm) Ceramic Speaker (1kΩ)
Input:	MIX MIC; sensitivity 5mV applicable microphone impedance 200~600Ω ϕ3.5 Line in; sensitivity 200mV/47kΩ over
Output:	Line out; sensitivity 420mV/4.7kΩ under Headphones; 32Ω (8~50Ω) ϕ3.5
Dimensions:	$23\frac{3}{16}''$(W) × $6\frac{5}{16}''$(H) × $6\frac{13}{16}''$(D) (588 × 161 × 174mm)
Weight:	11lbs. 4oz (5.1kg) without batteries

Disc Player Section:

Sampling Frequency:	44.1kHz
D-A Conversion:	16-bit linear
Pickup:	FF-1 (Fine focus•1 beam)
Light Source:	Semiconductor laser (wavelength 780nm)
No. of Channels:	2 channels, stereo
Frequency Response:	20~20,000Hz (±3dB)
Dynamic Range:	90dB (1kHZ)
S/N Ratio:	90dB (1kHZ)
Wow and Flutter:	below measurable limit

Radio Section:

Radio Frequency Range:	FM; 88~108MHz AM; 525~1610kHz
Intermediate Frequency:	FM; 10.7MHz AM; 455kHz
Sensitivity:	FM; 2.2μV/50mW output (−3dB limit sens.) AM; 71μV/m/50mW output

Tape Deck Section:

Frequency Response:	30~16,000Hz (with normal tape) 30~16,000Hz (with CrO_2 tape)
Recording System:	AC bias, AC erase
Tape Speed:	$1\frac{7}{8}$ ips (4.8cm/s)
Track System:	4-track 2 channel stereo recording and playback

Design and specifications are subject to change without notice.

Panasonic®

Matsushita Services Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Hawaii Inc.
91-238 Kauhi St. Ewa Beach
P.O. Box 774
Honolulu, Hawaii 96808-0774

Panasonic Sales Company,
Division of Matsushita Electric
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Ave. 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

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SAFETY PRECAUTIONS (For U.S.A.)

1. Before servicing, unplug the power cord to prevent an electric shock.
2. When replacing parts, use only manufacturer's recommended components for safety.
3. Check the condition of the power cord. Replace if wear or damage is evident.
4. After servicing, be sure to restore the lead dress, insulation barriers, insulation papers, sheilds, etc.
5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

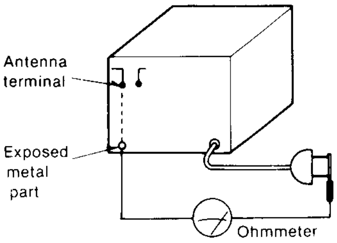


Fig. 1

Resistance = 3MΩ—5.2MΩ

INSULATION RESISTANCE TEST (For U.S.A.)

1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
2. Turn on the power switch.
3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads, antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3MΩ and 5.2MΩ to all exposed parts*. (Fig. 1) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. 2)

   * **Note:** Some exposed parts may be isolated from the chassis by design. These will read infinity.
4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

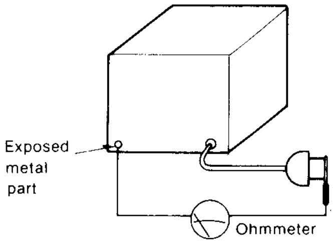


Fig. 2

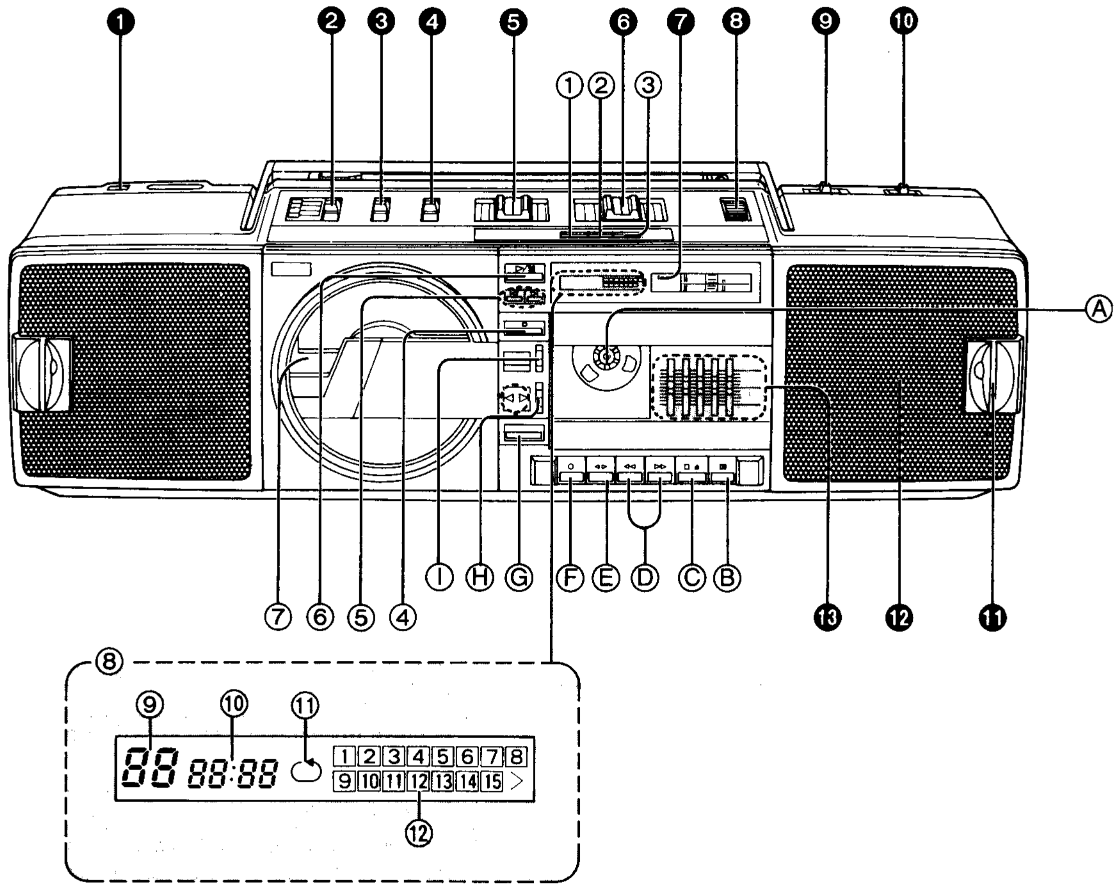
Resistance = Approx ∞

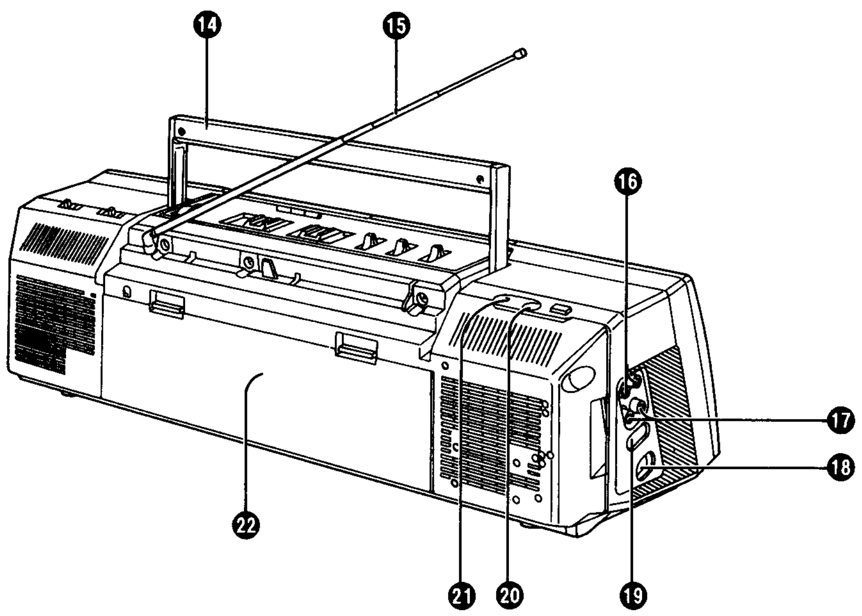
PRECAUTION OF LASER DIODE

CAUTION:

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

LOCATION OF CONTROLS AND COMPONENTS





RADIO/GENERAL CONTROLS

- ❶ **Power Switch (POWER)**
- ❷ **Function Selector (SELECTOR)**
- ❸ **Tape Selector (TAPE)**
- ❹ **※Dolby Noise Reduction Switch (DOLBY NR)**
- ❺ **Balance Control (BALANCE)**
- ❻ **Volume Control (VOLUME)**
- ❼ **FM Stereo Indicator (FM STEREO)**
- ❽ **Tuning Control (TUNING)**
- ❾ **Band Selector (BAND)**
- ❿ **Mode Selector/Beat Proof Switch (MODE/B.P)**
- ⓫ **Speakers [Tweeter] 5½″ (14cm) 2.7Ω**
- ⓬ **Speakers [Woofer] ⅞″ (2.2cm) 1kΩ**
- ⓭ **Graphic Equalizer Controls**
- ⓮ **Handle**
- ⓯ **Telescopic Antenna**
- ⓰ **Line Input Jacks (LINE IN) 200mV/47kΩ**
- ⓱ **Line Output Jacks (LINE OUT) 420mV/4.7kΩ**
- ⓲ **AC Socket (AC IN ~)**
- ⓳ **Headphones Jack (PHONES) 32Ω (8~50Ω) φ3.5**

When using the headphones, avoid listening to sound at excessive volume levels, which may injure your ears.

- ⓴ **Mixing Microphone Jack (MIX MIC) 5mV/200~600Ω, φ3.5**
- ㉑ **Built-in Microphone (MIC)**
- ㉒ **Battery Compartment**

※"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
Noise Reduction System manufactured under license from Dolby Laboratories Licensing Corporation.

CD CONTROLS

- ① **Remaining Time Button (REM TIME)**
- ② **Repeat Button (REPEAT)**
- ③ **Memory/Recall Button (MEMORY/RECALL)**
- ④ **Stop/Clear Button (■STOP/CLEAR)**
- ⑤ **Skip/Search Buttons (⏮•⏭ SKIP/SEARCH)**
- ⑥ **Play/Pause Button (▶/❚❚PLAY/PAUSE)**
- ⑦ **Disc Holder**
- ⑧ **Display Panel**
- ⑨ **Track Display (TRACK)**
- ⑩ **Time Display (TIME)**
- ⑪ **Repeat Indicator**
- ⑫ **Program Display (PROGRAM)**

TAPE CONTROLS

- Ⓐ **Cassette Compartment**
- Ⓑ **Pause Button (❚❚PAUSE)**
- Ⓒ **Stop/Eject Button (■/▲STOP/EJECT)**
- Ⓓ **Fast/Cue Buttons (◀◀•▶▶FAST/CUE)**
- Ⓔ **Playback Button (◀•▶PLAY)**
- Ⓕ **Record Button (●$\boxed{\text{REC}}$)**
- Ⓖ **Synchro Record Switch (SYNCHRO TAPE & CD)**
- Ⓗ **Direction Selector and Direction/Power/Battery Check Indicators (DIRECTION/$\boxed{\text{POWER/BATT}}$)**
- Ⓘ **Reverse Mode Selector (REVERSE MODE)**

BATTERY SERVICE LIFE

UM-1 (D-size) Batteries
Approx. 7.5 hours of radio (EIAJ)
Approx. 2.5 hours of CD/recording
Approx. 2 hours of CD play
Approx. 13 hours of recording (EIAJ)
Approx. 6.5 hours of playback (EIAJ) with volume set at 10 position

The above battery service life is measured according to the conditions set forth by EIAJ (Electronic Industries Association of Japan). As the battery service life varies with the method of operation and environmental conditions, use these values as reference.

■ CAUTION REGARDING

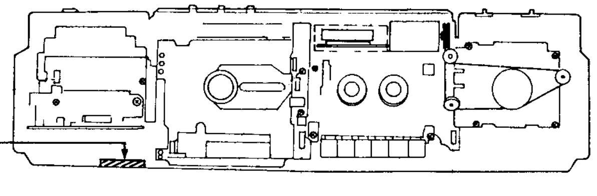
This model comes with a fuse (A type) or without a fuse (B type).

CAUTION : FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE 1.25A 125V FUSE.

ATTENTION : AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MÊME TYPE. 1.25A 125V

RQT4418ZA

(A Type only)

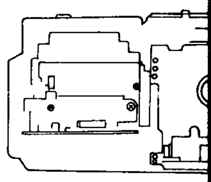


When replacing the fuse, refer to the caution label located near the fuse and replace the fuse with the specified type.

■ CLEAN

If the lens is stai
open the top co
the lens.

• To remove
Blow the lens w
to remove dust o



• To remove
If the blower is
with the lens c
from center of th

■ HANDL

The laser diode
or human body.
So, be careful of

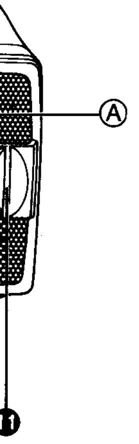
• Handling of
1. Do not give
because it is c
2. To prevent t
static shortin
When removi
job in a short
3. Take care not
4. Do not turn
ment). (It ha

• Grounding
1. Human body
Use the ant
electricity fro
2. Work table gr
Put a conduc
area where th
sheet.

Caution:
The static
grounded thr
let your cloth

▼ Be sure to fold

ENTS



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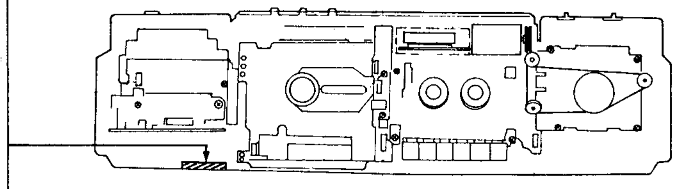
RQT4418ZA



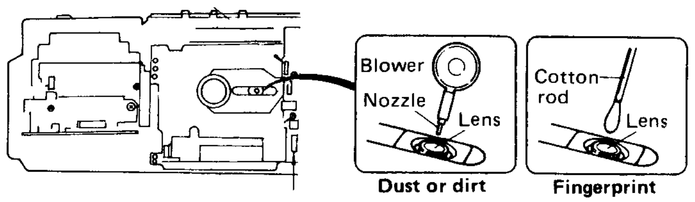
When replacing the fuse, refer to the caution label located near the fuse and replace the fuse with the specified type.

■ CLEANING OF LENS

If the lens is stained causing sound skip or operation failure, open the top cover by pressing the open button, and clean the lens.

• To remove dust or dirt

Blow the lens with the blower provided in the cleaning kit to remove dust or dirt.



Dust or dirt

Fingerprint

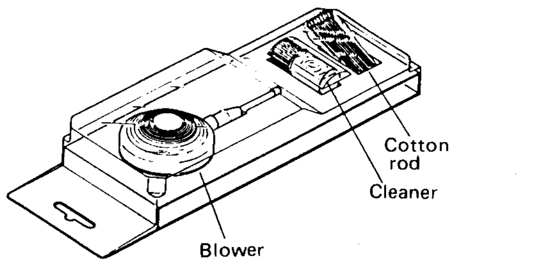
• To remove fingerprint

If the blower is not enough, moisten the cotton rod with the lens cleaner solution and wipe the lens with it from center of the lens to outside.

Cautions:

- Do not directly apply the cleaner solution to the lens. Do not apply too much solution to the cotton rod or otherwise the solution will flow into the player.
- Wipe the lens carefully. Do not give too much stress to the lens or otherwise it may scratch the lens or cause optical pickup trouble.
- If the solution should be too much applied, wipe the lens with a dry cotton rod.

Lens cleaning kit (Part No. : SZZP1038C)

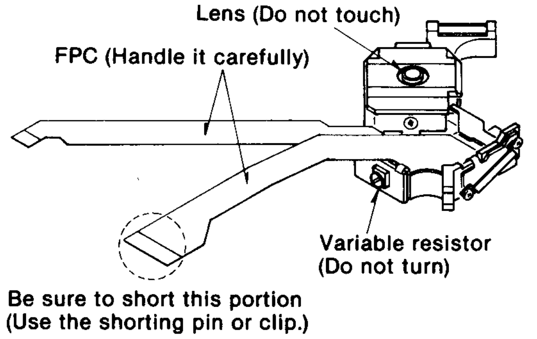


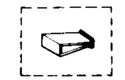
■ HANDLING PRECAUTIONS FOR OPTICAL PICKUP

The laser diode in the optical pickup may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the optical pickup.

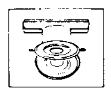
• Handling of optical pickup

1. Do not give excessive shock to the optical pickup because it is of extremely high precision structure.
2. To prevent the breakdown of the laser diode, an anti-static shorting pin is inserted into the FPC.
   When removing or connecting the short pin, finish the job in a short time.
3. Take care not to give excessive stress to the FPC.
4. Do not turn the variable resistor (laser power adjustment). (It has been already adjusted.)


Lens (Do not touch)
FPC (Handle it carefully)
Variable resistor
(Do not turn)
Be sure to short this portion
(Use the shorting pin or clip.)



Shorting pin



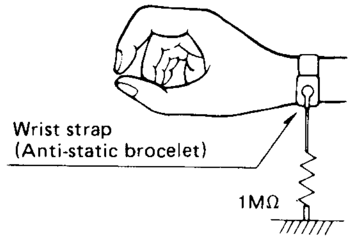
Clip

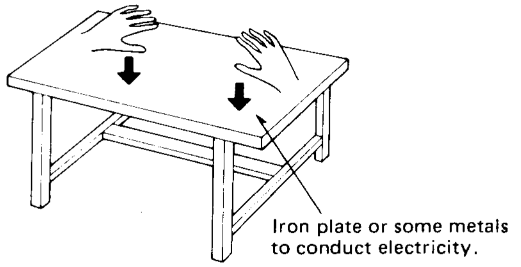
• Grounding for electrostatic breakdown prevention

1. Human body grounding
   Use the anti-static wrist strap to relieve the static electricity from your body.
2. Work table grounding
   Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed, and ground the sheet.

Caution:

The static electricity of your clothes will not be grounded through the wirst strap. So, take care not to let your clothes touch the optical pickup.





▼ Be sure to fold at the (▼) mark so that mark is on the outside.

DISASSEMBLY INSTRUCTIONS

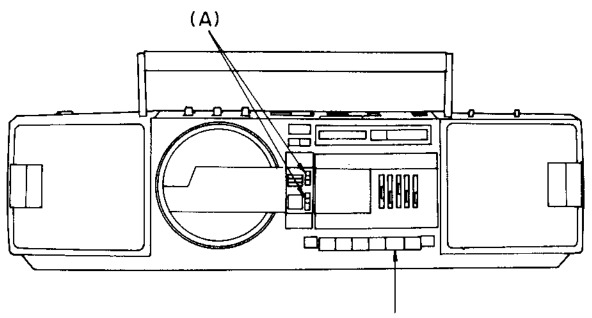

(A)
Stop/Eject Button

Fig. 1

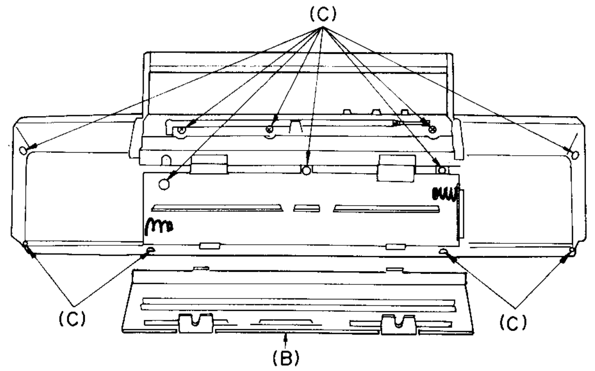


Fig. 2

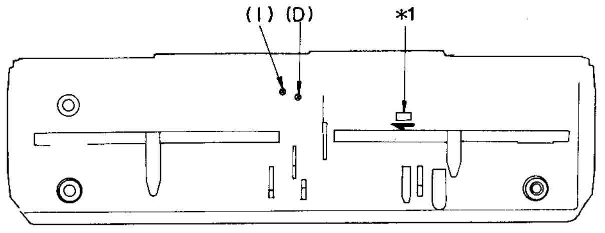


Fig. 3

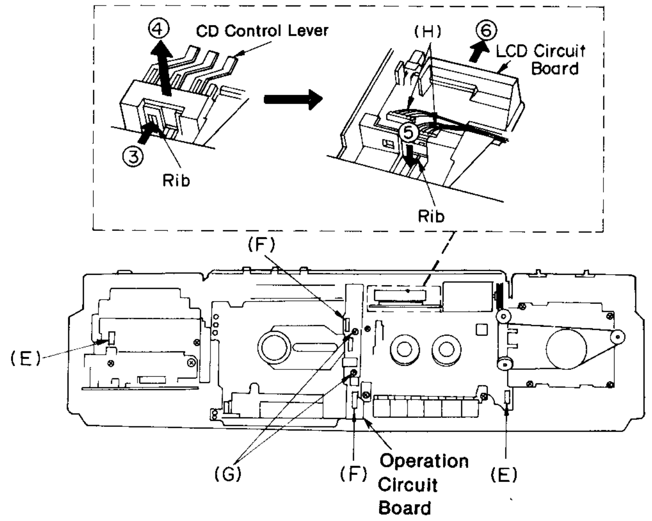

④ CD Control Lever
③
Rib
(H)
⑥ LCD Circuit Board
⑤
Rib
(F)
(E)
(G)
(F)
Operation Circuit Board
(E)

Fig. 4

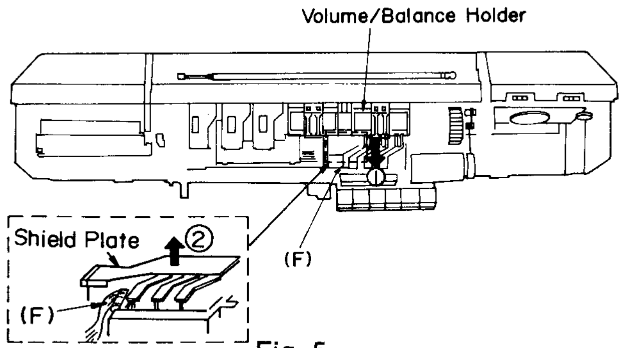

Volume/Balance Holder
Shield Plate
②
(F)
(F)
①

Fig. 5

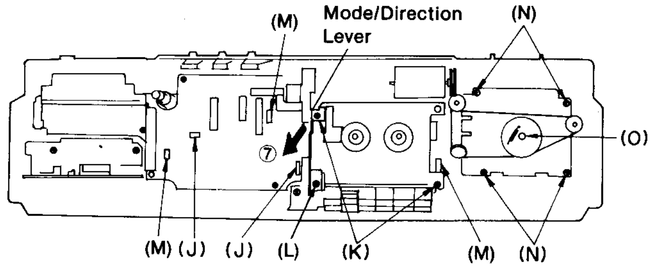

(M)
Mode/Direction Lever
(N)
⑦
(O)
(M) (J)
(J)
(L)
(K)
(M)
(N)

Fig. 6

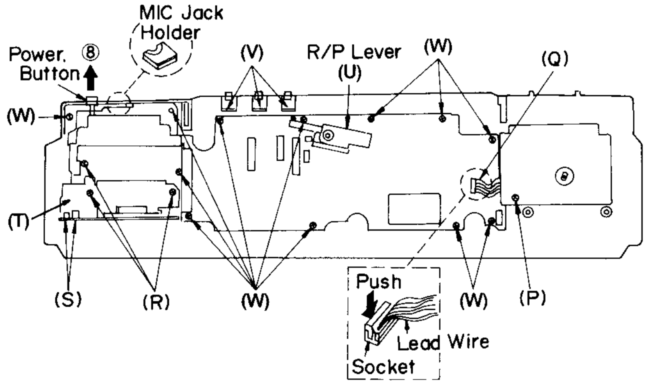

MIC Jack Holder
Power. ⑧ Button
(V)
R/P Lever (U)
(W)
(Q)
(W)
(T)
(S)
(R)
(W)
Push
Lead Wire
Socket
(W)
(P)

Fig. 7

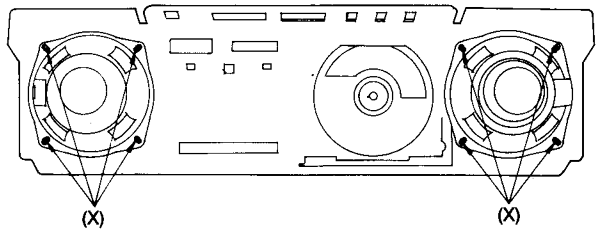


Fig. 8

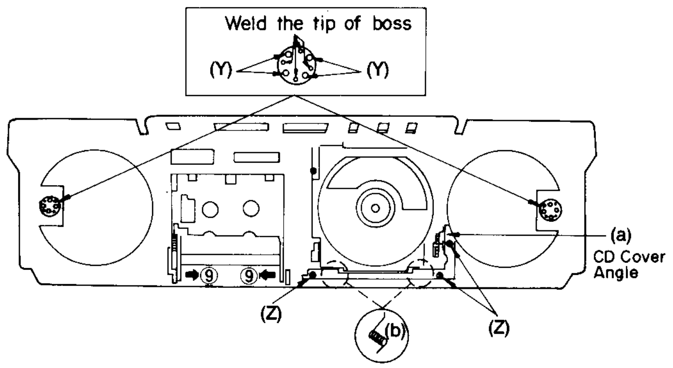

Weld the tip of boss
(Y)
(Y)
(a)
CD Cover Angle
⑨
⑨
(Z)
(b)
(Z)

Fig. 9

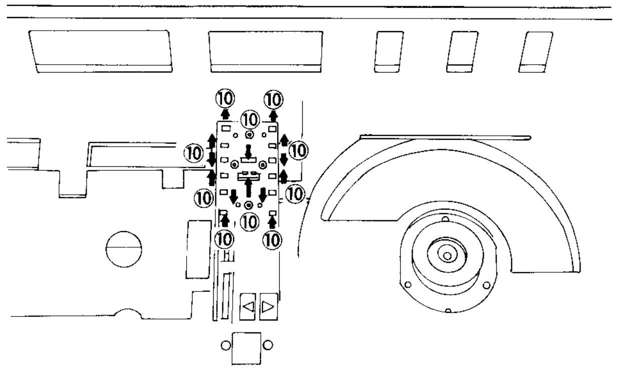


Fig. 10

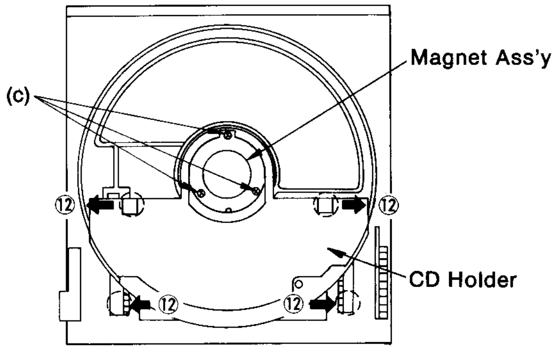

Magnet Ass'y
(c)
⑫
⑫
CD Holder
⑫
⑫

Fig. 12

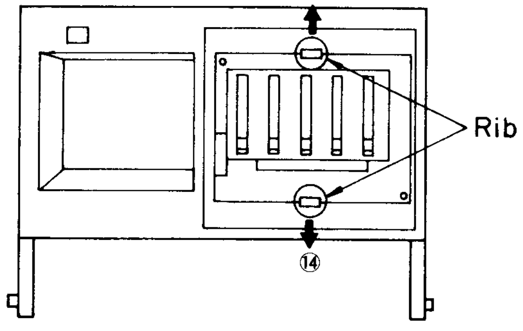


Fig. 14

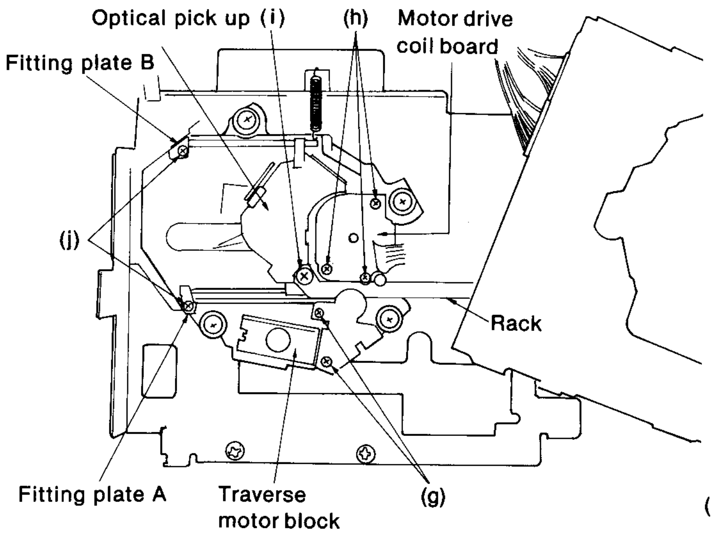

Optical pick up (i)
(h)
Motor drive coil board
Fitting plate B
(j)
Rack
Fitting plate A
Traverse motor block
(g)

Fig. 16

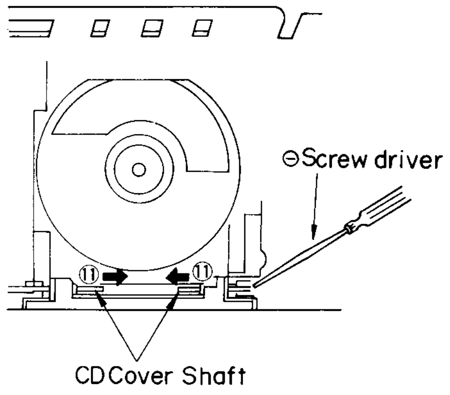

⊖Screw driver
⑪
⑪
CDCover Shaft

Fig. 11

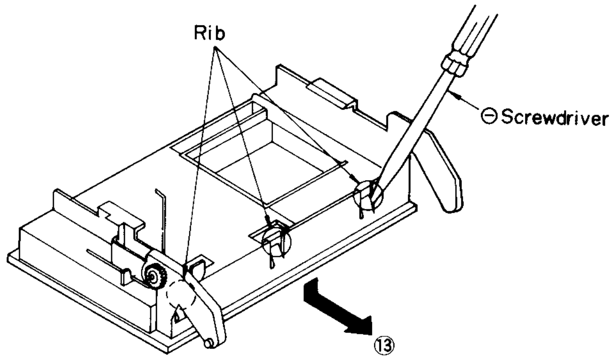

Rib
⊖Screwdriver
⑬

Fig. 13

1. Lift the connector.
2. Pull out FPC cord.

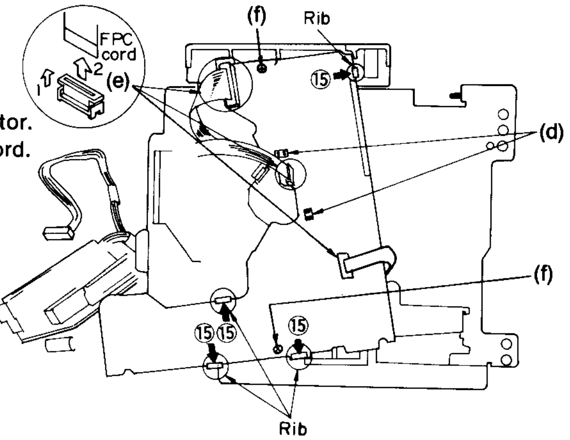

FPC cord
1
2
(e)
(f)
Rib
⑮
(d)
(f)
⑮⑮
⑮
Rib

Fig. 15

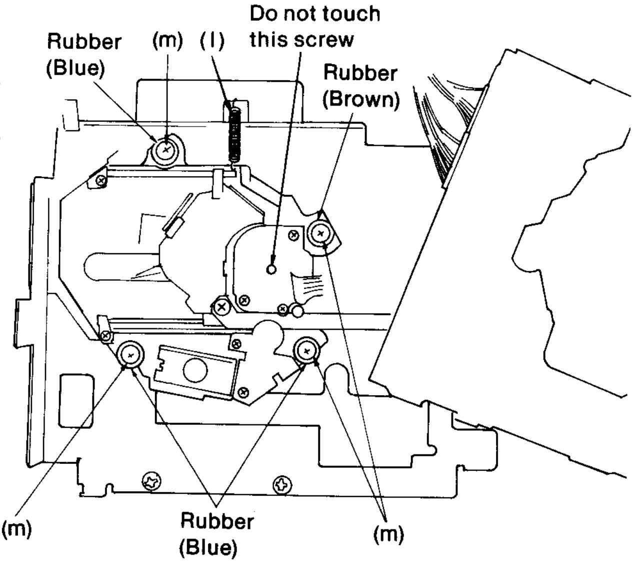
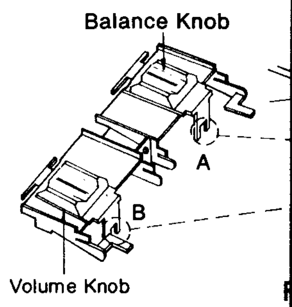
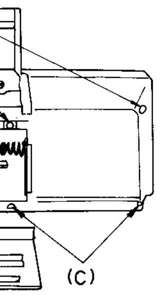
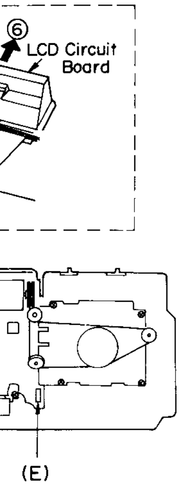

Rubber (Blue)
(m)
(l)
Do not touch this screw
Rubber (Brown)
(m)
Rubber (Blue)
(m)

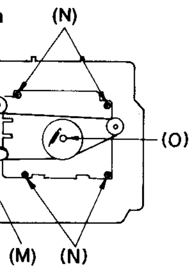
Fig. 17

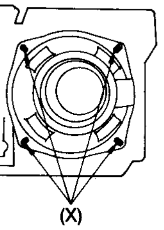

Balance Knob
A
B
Volume Knob

Steps.	Shown i
1	
2	2
3	2
4	3
5	
6	4
7	5
8	5
9	4,
10	4
11	4
12	4
13	4
14	3
15	6
16	6
17	6
18	6
19	6
20	6
21	6
22	7
23	7
24	7
25	7
26	7
27	7
28	7
29	7
30	7




⑥
LCD Circuit Board
(E)





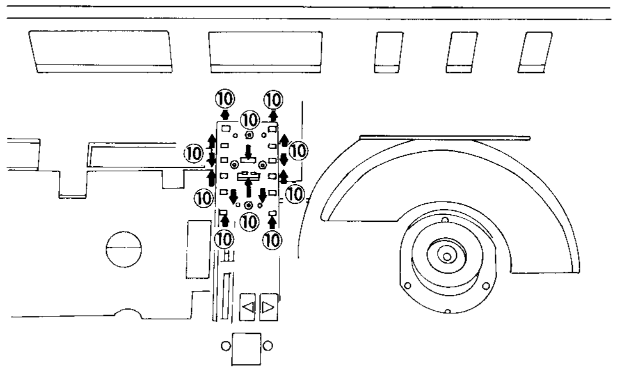


Fig. 10

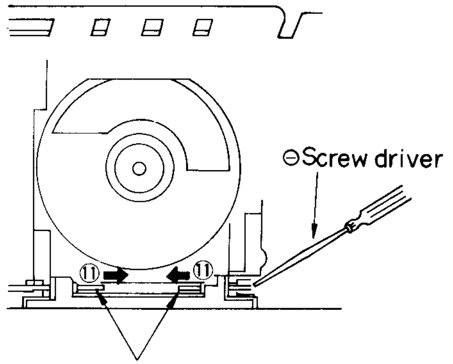

⊖Screw driver
⑪
⑪
CD Cover Shaft

Fig. 11

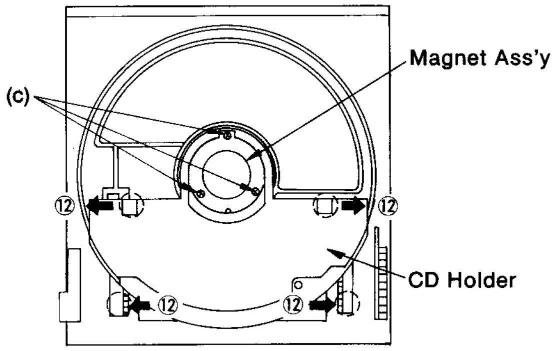

Magnet Ass'y
(c)
⑫
⑫
⑫
⑫
CD Holder

Fig. 12

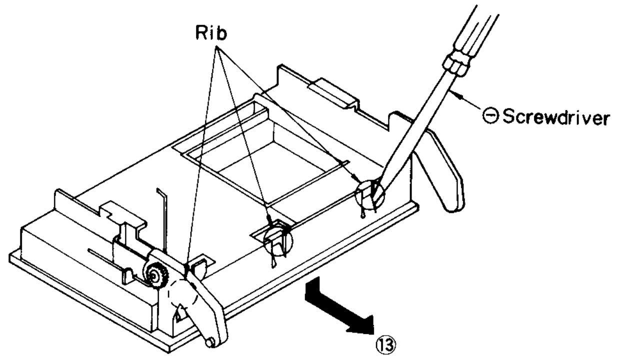

Rib
⊖Screwdriver
⑬

Fig. 13

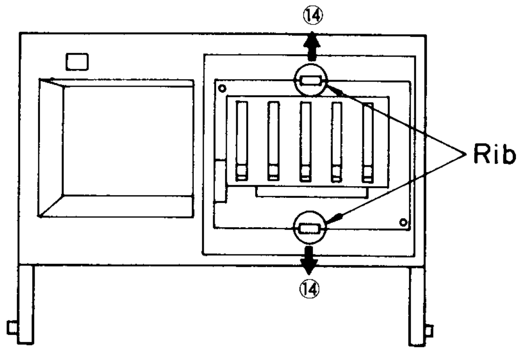
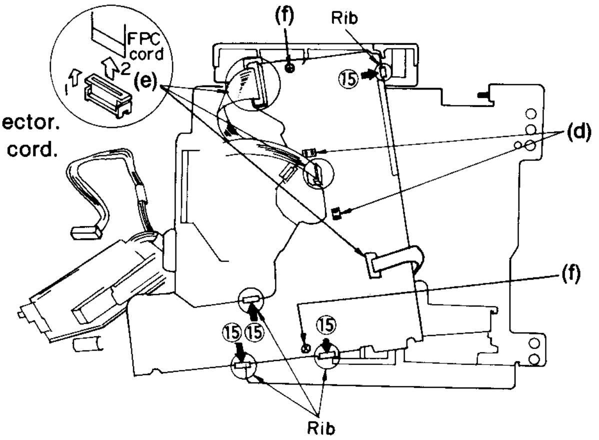


Fig. 14


FPC cord
(e)
(f)
Rib
⑮
(d)
(f)
⑮⑮
⑮
Rib

1. Lift the connector.
2. Pull out FPC cord.

Fig. 15

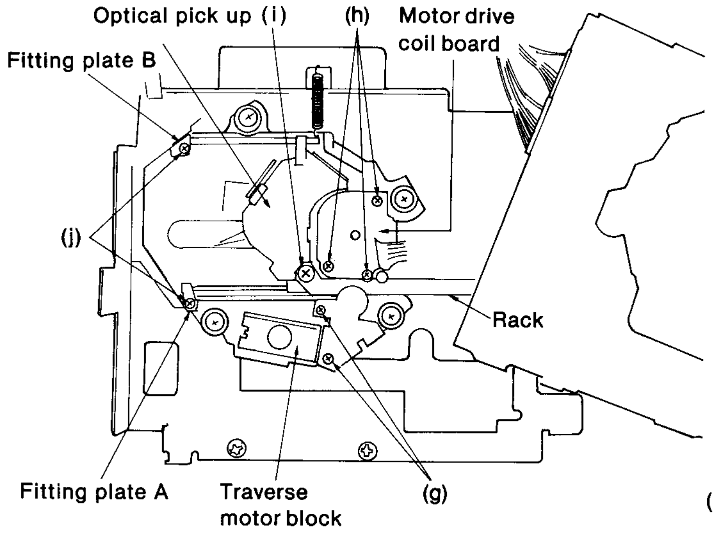

Optical pick up (i)
(h)
Motor drive coil board
Fitting plate B
(j)
Rack
Fitting plate A
Traverse motor block
(g)

Fig. 16

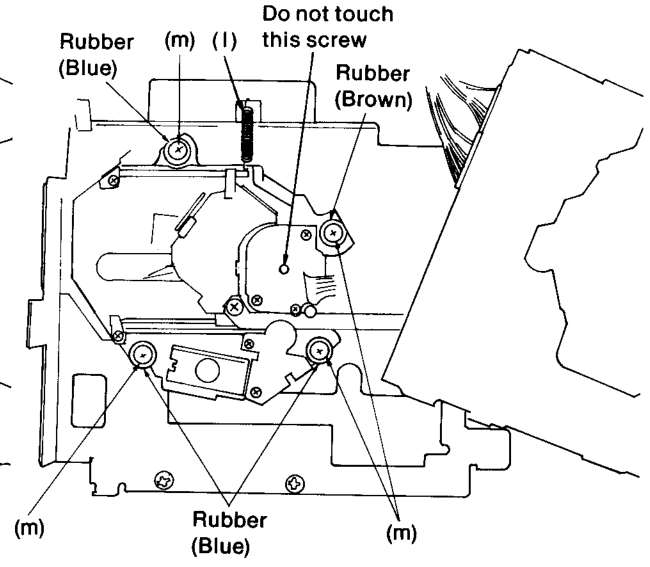

Rubber (Blue)
(m)
(l)
Do not touch this screw
Rubber (Brown)
(m)
Rubber (Blue)
(m)

Fig. 17

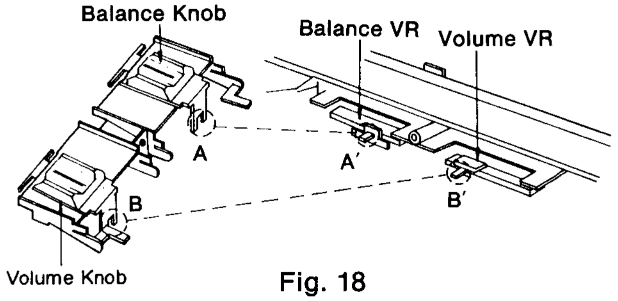

Balance Knob
Balance VR
Volume VR
A
A'
B
B'
Volume Knob

Fig. 18

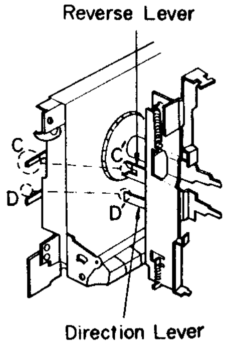

Reverse Lever
C
C'
D
D'
Direction Lever

Fig. 19

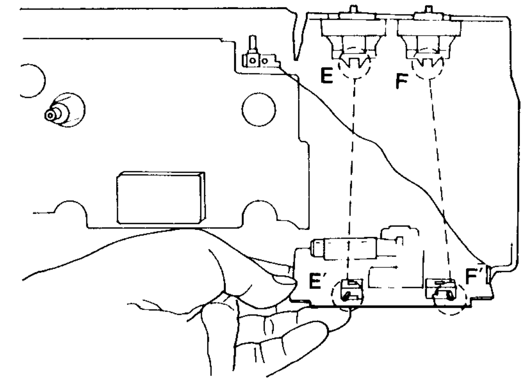


Fig. 20

Steps.	Shown in Fig. —.	To remove —.	Remove —.
1	1	Front Cabinet (*2)	Knob .... (A)×2
2	2		Remove the battery cover .... (B)×1
3	2		Screw (3×40)mm .... (C)×12
4	3		Screw (3×8)mm .... (D)×1
5	1		Push the Stop/Eject button
6	4		Socket (CP101, CP108) .... (E)×2
7	5	Volume/Balance Holder (*3)	Remove the volume/balance holder in the direction of arrow ①.
8	5	Operation Circuit Board	Remove the shield plate in the direction of arrow ②.
9	4, 5		Socket (CP106, CP501, CP502) .... (F)×3
10	4		Screw (3×6)mm .... (G)×2
11	4	LCD Circuit Board	Push the rib in the direction of arrow ③ and pull out the CD control lever in the direction of the arrow ④.
12	4		Push the rib in the direction of arrow ⑤ and pull out the LCD circuit board in the direction of the arrow ⑥.
13	4		Socket (CP503, CP504) .... (H)×2
14	3	Compact Disc Ass'y	Screw (3×8)mm .... (I)×1
15	6		Socket (CP103, CP105) .... (J)×2
16	6	Mechanism Ass'y (*4)	Screw (3×12)mm .... (K)×3
17	6		Screw (3×4)mm .... (L)×1
18	6		Remove the mode/direction lever in the direction of arrow ⑦.
19	6		Socket (CP102, CP104, CP109) .... (M)×3
20	6	Dial Chassis	Screw (3×12)mm .... (N)×4
21	6		Screw (2.6×5)mm with washer .... (O)×1
22	7	Tuner Circuit Board (*5)	Screw (3×10)mm .... (P)×1
23	7		Socket (CS107) .... (Q)×1
24	7	Power Supply Circuit Board	Screw (3×12)mm .... (R)×3
25	7		Socket (CP110, CP111) .... (S)×2
26	7		Jack pressure angle .... (T)×1
27	7	Main Circuit Board	R/P Lever .... (U)×1
28	7		Switch knob holder .... (V)×3
29	7		Screw (3×12)mm .... (W)×12
30	7		Pull out the power button in the direction of arrow ⑧.

Steps.	Shown in Fig. —.	To remove —.	Remove —.
31	8	Speaker (Woofer)	Screw (3 × 10) .... (X) × 8
32	9	Tweeter Ass'y (*6)	Cut the tip of boss.. (Y) × 8
33	9	Cassette Holder	Push the boss in the direction of arrows ⑨ to remove it.
34	10	Operation Button	Push the rid in the direction of arrow ⑩.
35	9	CD Compartment	Screw (3 × 10) mm .... (Z) × 3
36	9		Angle.. (a) × 1
37	9		Spring .... (b) × 2
38	11		Push the CD cover shaft in the direction of arrow ⑪ by used ⊖ screw driver.
39	12	CD Holder	Push the rib in the direction of arrow ⑫.
40	12	Magnet	Screw (2 × 4) mm .... (c) × 3
41	13	Cassette Panel (*7)	Remove the rid with ⊖ screwdriver. Remove the cassette panel in the direction of arrow ⑬.
42	14	Graphic Equalizer Circuit Board	Push the rid in the direction of arrow ⑭.
43	15	CD Circuit Board	Socket (CN103, CN405) .... (d) × 2
44			FPC cord .... (e) × 3
45			Screw (1.4 × 5.6) mm .... (f) × 2
46			Push the rid in the direction of arrows ⑮ to remove it.
47	16	Traverse Motor Block	Screw (2 × 6) mm .... (g) × 2
48	16	Motor Drive Coil Board	Screw (2 × 13) mm .... (h) × 3
49	16	Rack	Screw .... (i) × 1
50	16	Optical Pick-up	Screw (2 × 6) mm .... (j) × 2
51	16		Fitting Plate A, B .... (k) × 2
52	17	Traverse Base	Spring .... (l) × 1
53	17		Screw .... (m) × 4

(*1) When the tape is caught in the pinch roller, etc. release the tape by tuning the pulley on the motor with the screwdriver in the direction of the arrow. (Fig. 3)

(*2) The handle is attached between the front cabinet and the rear cabinet, so the handle can be easily removed by first removing the front cabinet.
When removing the front cabinet, the microphone jack holder may come off, so be careful not to lose it. (Fig. 7)

(*3) During installation, simultaneously fit in A and A′, B and B′. (Fig. 18)

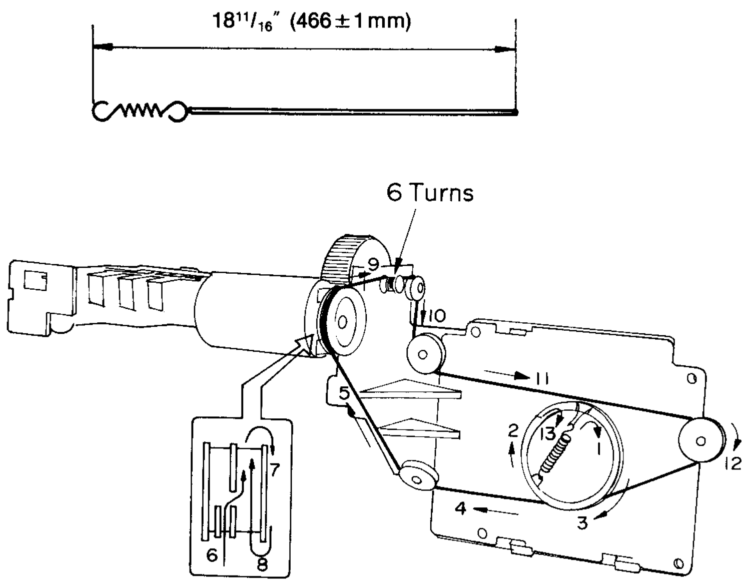
(*4) During installation, simultaneously fit in C and C′, D and D′. (Fig. 19)

(*5) During installation, simultaneously fit in E and E′, F and F′. (Fig. 20)

(*6) When replacing the tweeter, attach the tweeter to the front cabinet by welding it to the remainder of the boss. (Fig. 9)

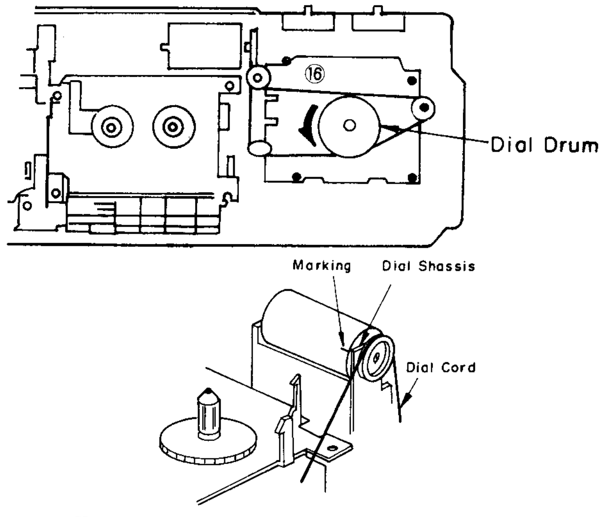
(*7) The ribs on the cassette lid are extremely rigid, so be careful not to break them.

■ DIAL THREADING



18¹¹/₁₆" (466 ± 1 mm)
6 Turns
1
2
3
4
5
6
7
8
9
10
11
12
13

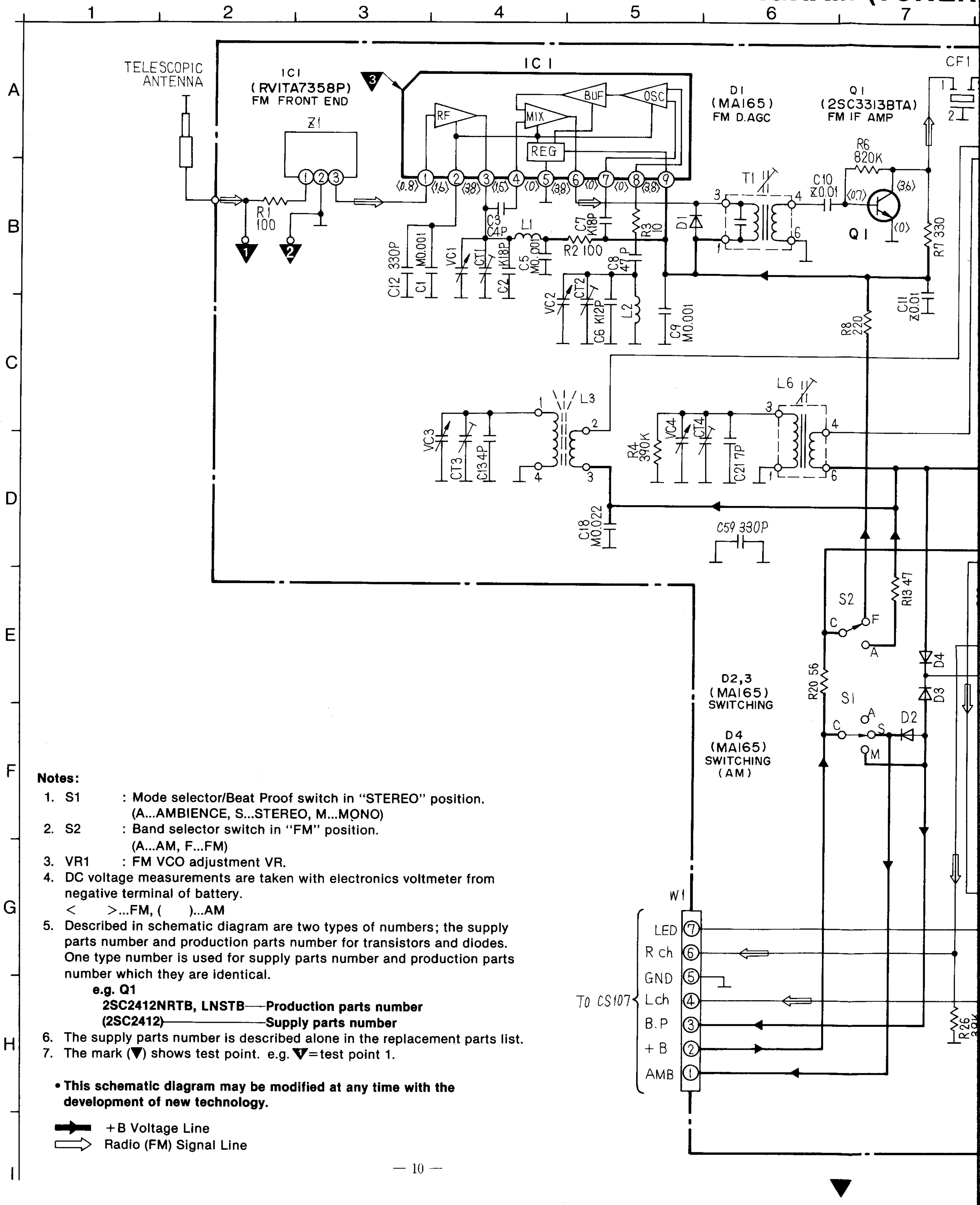
■ POINT ADJUSTMENT



⑯
Dial Drum
Marking
Dial Shassis
Dial Cord

1. Turn the dial drum all the way in the direction of the arrow ⑯.
2. Line up the marking on the memory sheet with the corner of the dial chassis.

SCHEMATIC DIAGRAM (TUNER



1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
TELESCOPIC ANTENNA
IC1 (RVITA7358P) FM FRONT END
IC 1
RF
MIX
BUF
OSC
REG
Z1
R1 100
D1 (MA165) FM D.AGC
Q1 (2SC3313BTA) FM IF AMP
CF1
R6 820K
T1
C10 0.01
Q1
R7 330
R8 220
C11 0.01
C12 330P
C1 0.001
VC1
CT1
C2 18P
C3 4P
L1
C5 0.001
C7 18P
R2 100
C8 47P
R3 10
D1
VC2
CT2
C6 12P
L2
C9 0.001
L6
L3
VC3
CT3
C13 4P
R4 390K
VC4
CT4
C21 7P
C18 0.022
C59 330P
S2
R13 47
D4
D3
D2
R20 56
S1
D2,3 (MA165) SWITCHING
D4 (MA165) SWITCHING (AM)
W1
LED ⑦
R ch ⑥
GND ⑤
L ch ④
B.P ③
+B ②
AMB ①
To CS107
R26

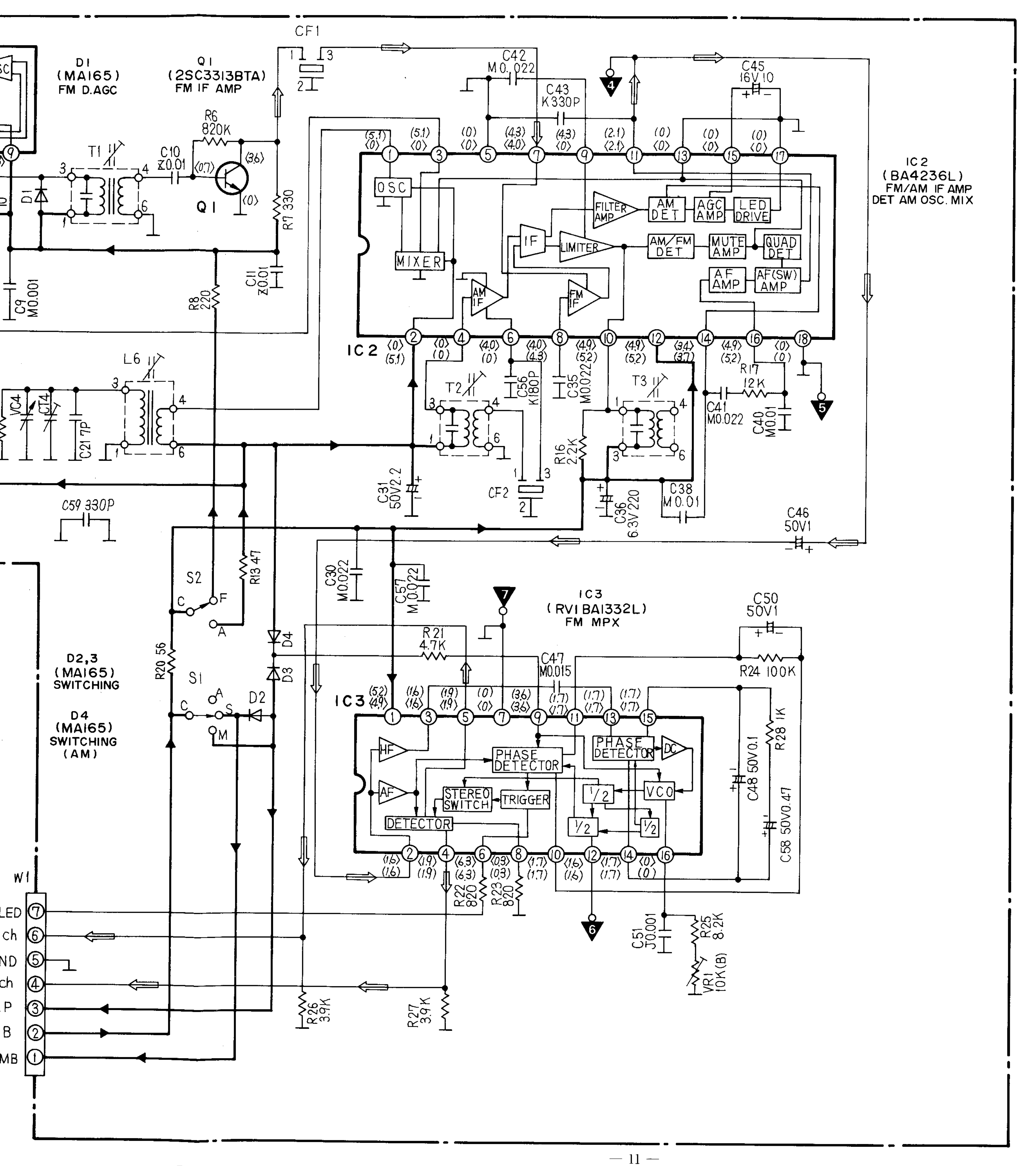
Notes:

1. S1 : Mode selector/Beat Proof switch in "STEREO" position.
   (A...AMBIENCE, S...STEREO, M...MONO)
2. S2 : Band selector switch in "FM" position.
   (A...AM, F...FM)
3. VR1 : FM VCO adjustment VR.
4. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   < >...FM, ( )...AM
5. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
   e.g. Q1
   2SC2412NRTB, LNSTB——Production parts number
   (2SC2412)——————Supply parts number
6. The supply parts number is described alone in the replacement parts list.
7. The mark (▼) shows test point. e.g. ▼=test point 1.

- **This schematic diagram may be modified at any time with the development of new technology.**

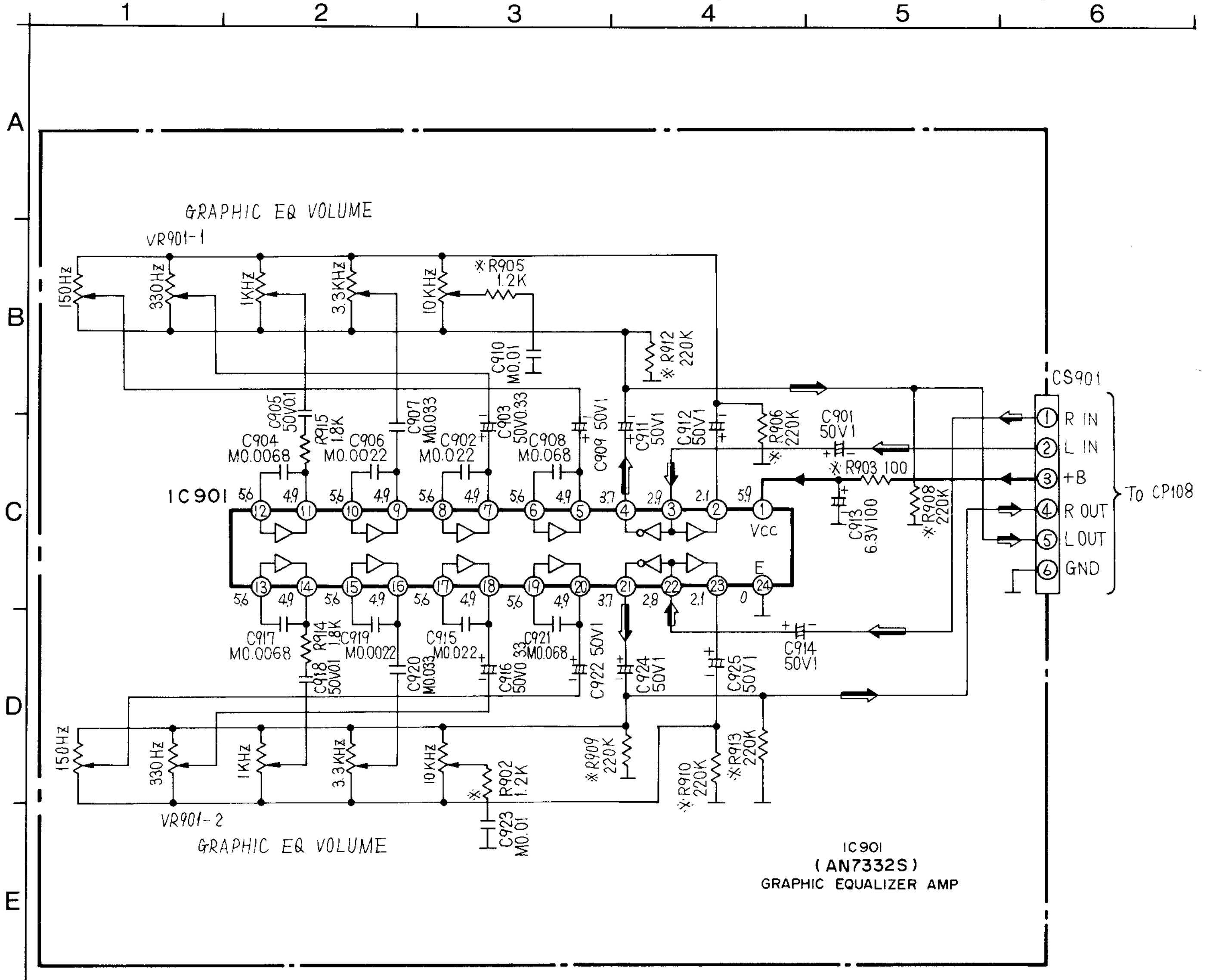
➡ +B Voltage Line
⇨ Radio (FM) Signal Line

TIC DIAGRAM (TUNER SECTION)



6
7
8
9
10
11
12
CF1
D1 (MA165) FM D.AGC
Q1 (2SC3313BTA) FM IF AMP
R6 820K
T1
C10 Z0.01
Q1
R7 330
C42 M0.022
C43 K330P
C45 16V10
IC2 (BA4236L) FM/AM IF AMP DET AM OSC. MIX
OSC
MIXER
FILTER AMP
AM DET
AGC AMP
LED DRIVE
IF
LIMITER
AM/FM DET
MUTE AMP
QUAD DET
AM IF
FM IF
AF AMP
AF(SW) AMP
IC2
C9 M0.001
C11 Z0.01
R8 220
L6
VC4
CT4
C21 7P
T2
T3
C56 K180P
C35 M0.022
R16 2.2K
R17 12K
C41 M0.022
C40 M0.01
C31 50V2.2
CF2
C36 6.3V220
C38 M0.01
C46 50V1
C59 330P
S2
R13 47
C30 M0.022
C57 M0.022
IC3 (RV1BA1332L) FM MPX
C50 50V1
R21 4.7K
C47 M0.015
R24 100K
D2,3 (MA165) SWITCHING
D4 (MA165) SWITCHING (AM)
R20 56
S1
D2
D3
D4
IC3
HF
AF
PHASE DETECTOR
PHASE DETECTOR
DC
STEREO SWITCH
TRIGGER
VCO
DETECTOR
1/2
1/2
1/2
R28 1K
C48 50V0.1
C58 50V0.47
R22 820
R23 820
C51 J0.001
R25 8.2K
VR1 10K(B)
R26 3.9K
R27 3.9K
W1
LED
ch
ND
ch
P
B
MB

SCHEMATIC DIAGRAM (G. EQ SECTION)



1
2
3
4
5
6
A
B
C
D
E
F
G
H
I
GRAPHIC EQ VOLUME
VR901-1
150Hz
330Hz
1KHz
3.3KHz
10KHz
※R905 1.2K
C910 M0.01
※R912 220K
CS901
R IN
L IN
+B
R OUT
L OUT
GND
To CP108
C901 50V1
※R903 100
C913 6.3V100
※R908 220K
※R906 220K
IC901
Vcc
C904 M0.0068
C905 50V0.1
R915 1.8K
C906 M0.0022
C907 M0.033
C902 M0.022
C903 50V0.33
C908 M0.068
C909 50V1
C911 50V1
C912 50V1
C917 M0.0068
R914 1.8K
C918 50V0.1
C919 M0.0022
C920 M0.033
C915 M0.022
C916 50V0.33
C921 M0.068
C922 50V1
C924 50V1
C925 50V1
C914 50V1
※R909 220K
※R910 220K
※R913 220K
R902 1.2K
C923 M0.01
VR901-2
GRAPHIC EQ VOLUME
IC901 (AN7332S) GRAPHIC EQUALIZER AMP

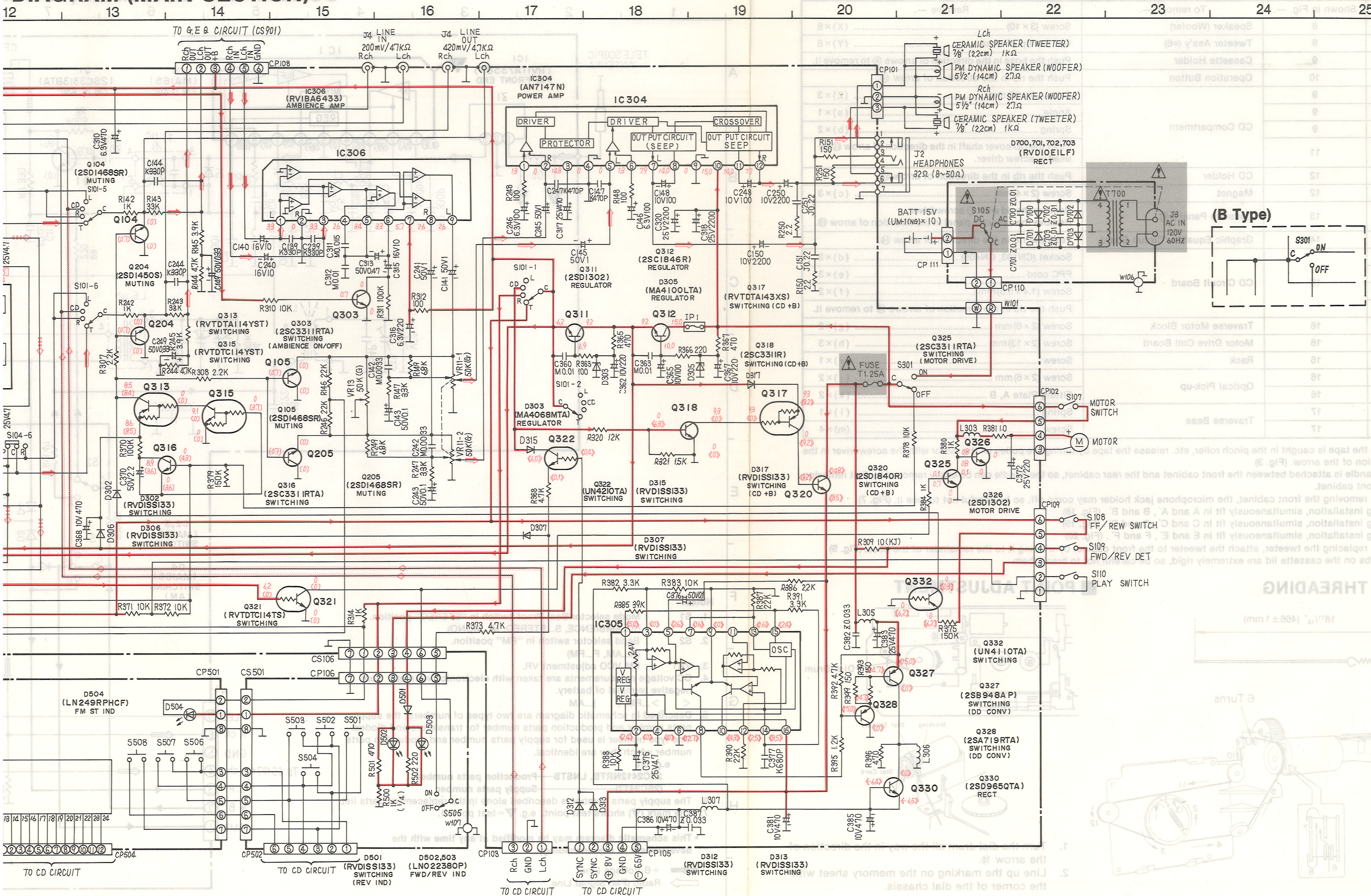
Notes:

1. VR901-1, 901-2: G. EQ Control VR.
2. (※) mark...Printed Resistor.
3. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
   No mark...Playback
4. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
   e.g. Q1
   2SC2412NRTB, LNSTB——Production parts number
   (2SC2412)——————Supply parts number
5. The supply parts number is described alone in the replacement parts list.

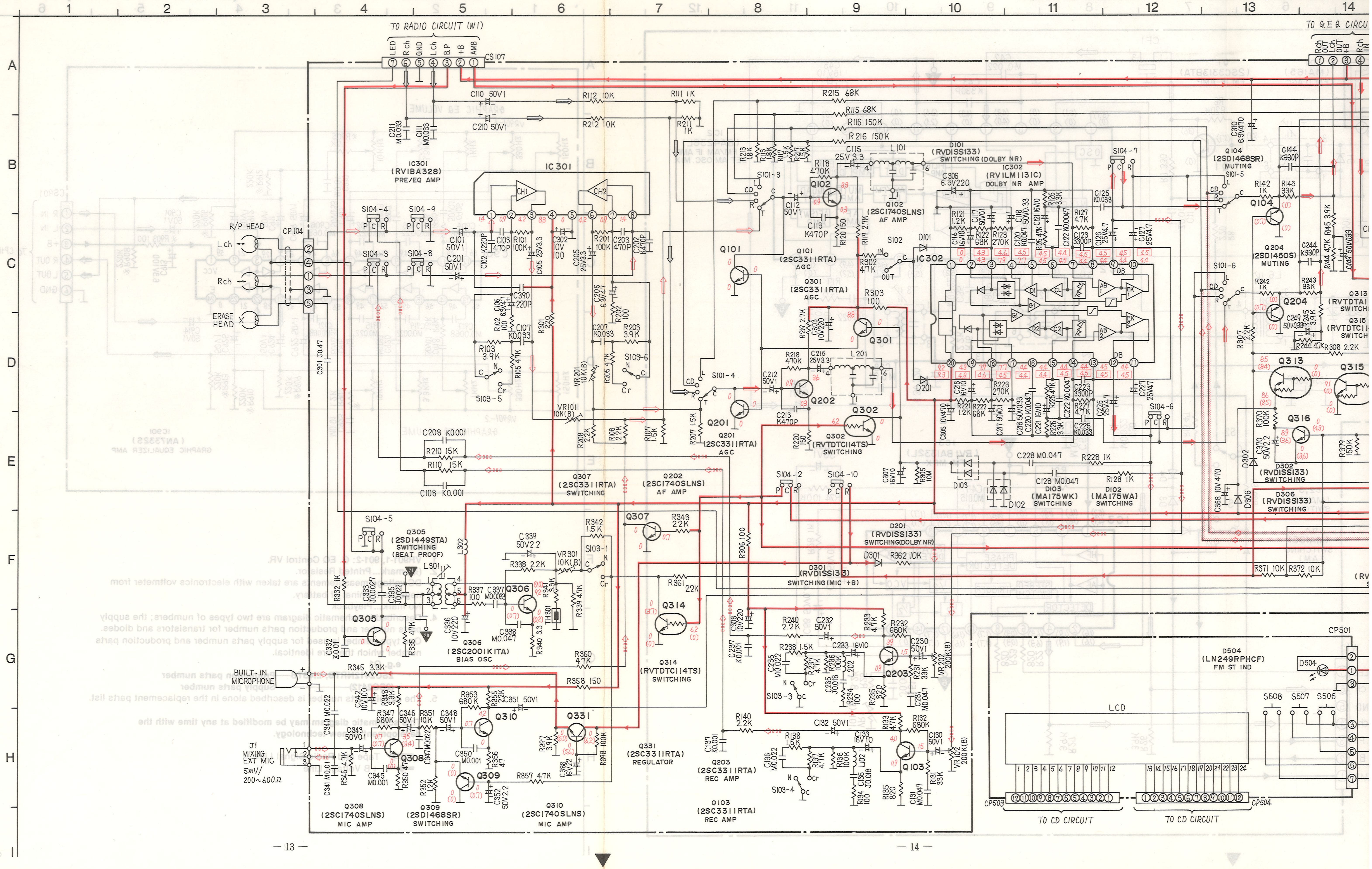
- **This schematic diagram may be modified at any time with the development of new technology.**

⇨ Tape and Radio Signal Line
➡ +B Voltage Line

DIAGRAM (MAIN SECTION)

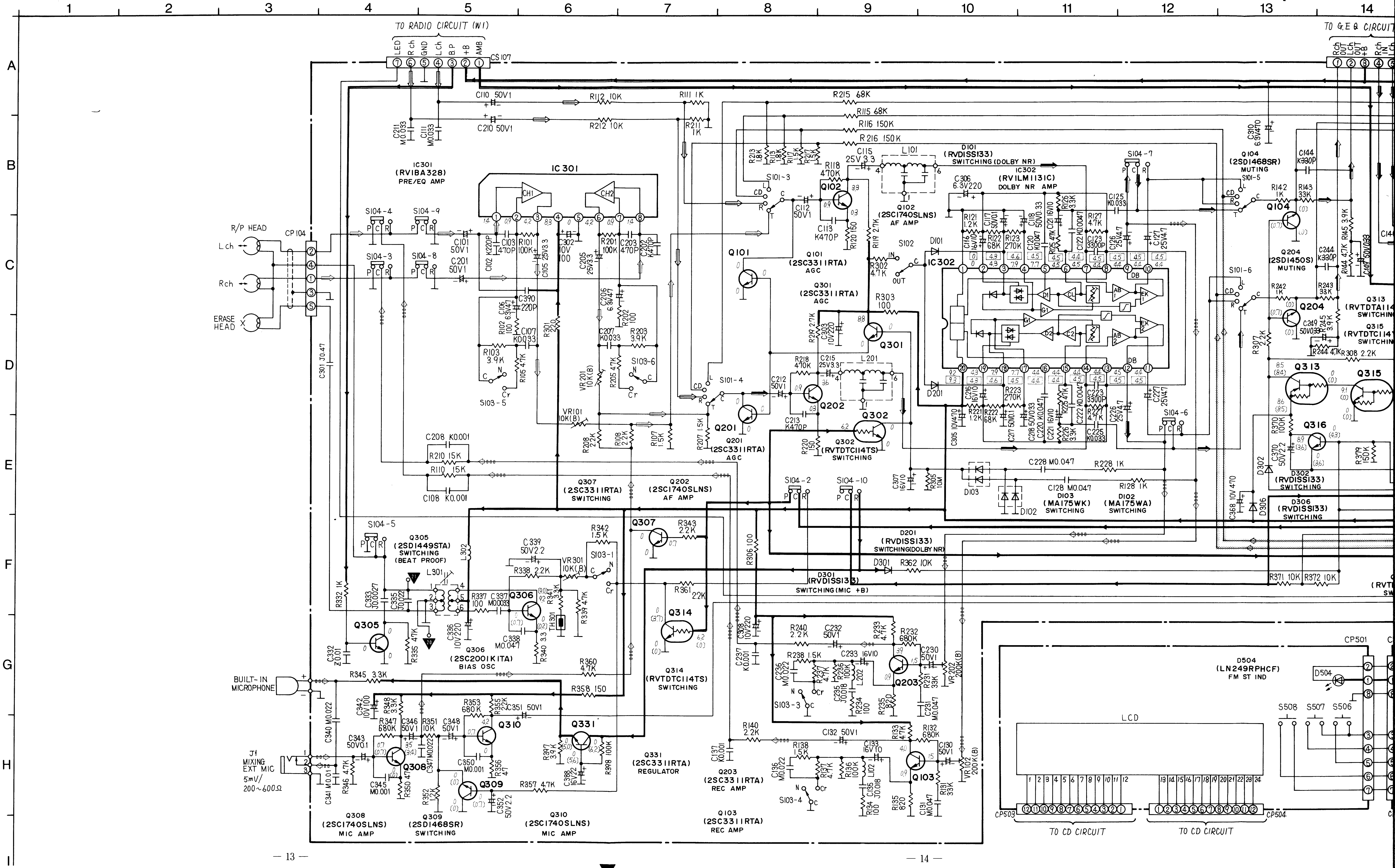

12
13
14
15
16
17
18
19
20
21
22
23
24
25
TO G.E.Q. CIRCUIT (CS901)
Rch OUT
Lch OUT
+B
Rch IN
Lch IN
GND
CP108
J4 LINE IN 200mV/47KΩ
J4 LINE OUT 420mV/4.7KΩ
Rch
Lch
IC304 (AN7147N) POWER AMP
IC306 (RVIBA6433) AMBIENCE AMP
IC306
IC304
DRIVER
PROTECTOR
DRIVER
CROSSOVER
OUT PUT CIRCUIT (SEEP)
OUT PUT CIRCUIT SEEP
CP101
Lch
CERAMIC SPEAKER (TWEETER) 7/8" (2.2cm) 1KΩ
PM DYNAMIC SPEAKER (WOOFER) 5 1/2" (14cm) 2.7Ω
Rch
PM DYNAMIC SPEAKER (WOOFER) 5 1/2" (14cm) 2.7Ω
CERAMIC SPEAKER (TWEETER) 7/8" (2.2cm) 1KΩ
J2 HEADPHONES 32Ω (8~50Ω)
D700,701,702,703 (RVDIOEILF) RECT
T700
BATT 15V (UM-1(N6)× 10)
S105 DC AC
J3 AC IN 120V 60Hz
CP 111
CP110
W106
W101
(B Type)
S301
ON
OFF
Q104 (2SD1468SR) MUTING
S101-5
Q204 (2SD1450S) MUTING
S101-6
Q313 (RVTDTA114YST) SWITCHING
Q315 (RVTDTC114YST) SWITCHING
Q303 (2SC3311RTA) SWITCHING (AMBIENCE ON/OFF)
Q105 (2SD1468SR) MUTING
Q316 (2SC3311RTA) SWITCHING
Q205 (2SD1468SR) MUTING
D302 (RVDISS133) SWITCHING
D306 (RVDISS133) SWITCHING
S104-6
S101-1
Q311 (2SD1302) REGULATOR
Q312 (2SC1846R) REGULATOR
D305 (MA4100LTA) REGULATOR
Q317 (RVTDTA143XS) SWITCHING (CD +B)
Q318 (2SC331IR) SWITCHING (CD+B)
IP1
S101-2
D303 (MA4068MTA) REGULATOR
D315
Q322
Q322 (UN4210TA) SWITCHING
D315 (RVDISS133) SWITCHING
D317 (RVDISS133) SWITCHING (CD +B)
Q320
Q320 (2SD1840R) SWITCHING (CD +B)
Q325 (2SC3311RTA) SWITCHING (MOTOR DRIVE)
FUSE T1.25A
S301
Q326 (2SD1302) MOTOR DRIVE
CP102
S107 MOTOR SWITCH
M MOTOR
CP109
S108 FF/REW SWITCH
S109 FWD/REV DET
S110 PLAY SWITCH
D307
D307 (RVDISS133) SWITCHING
Q321
Q321 (RVTDTC114TS) SWITCHING
IC305
OSC
REG
V REG
Q332
Q332 (UN4110TA) SWITCHING
Q327
Q327 (2SB948AP) SWITCHING (DD CONV)
Q328
Q328 (2SA719RTA) SWITCHING (DD CONV)
Q330
Q330 (2SD965QTA) RECT
L305
L306
L307
CS106
CP106
CP501
CS501
D504 (LN249RPHCF) FM ST IND
D504
S503
S502
S501
S508
S507
S506
S504
D501
D502
D503
S505
W107
ON
OFF
CP504
TO CD CIRCUIT
CP502
TO CD CIRCUIT
D501 (RVDISS133) SWITCHING (REV IND)
D502,503 (LNO2238OP) FWD/REV IND
CP103
Rch
GND
Lch
TO CD CIRCUIT
CP105
SYNC
SYNC
⊕ 8V
GND
⊖ 6.5V
TO CD CIRCUIT
D312 (RVDISS133) SWITCHING
D313 (RVDISS133) SWITCHING
D312
D313

SCHEMATIC DIAGRAM (MAIN SEC



TO RADIO CIRCUIT (W1)
LED
R ch
GND
L Ch
B.P
+B
AMB
CS107
C110 50V1
C210 50V1
R112 10K
R212 10K
R111 1K
R211 1K
C211 M0.033
C111 M0.033
IC301 (RV1BA328) PRE/EQ AMP
IC 301
CH1
CH2
R/P HEAD
Lch
Rch
ERASE HEAD
CP104
S104-4
S104-9
S104-3
S104-8
C101 50V1
C201 50V1
C102 K220P
C103 470P
R101 100K
C105 25V3.3
C302 10V 100
C205 25V3.3
R201 100K
C203 470P
C202 K220P
C390 220P
C106 6.3V47
R102 100
C107 K0.033
R301 220
C206 6.3V47
R202 100
C207 K0.033
R203 3.9K
R103 3.9K
R105 47K
S103-5
VR201 10K(B)
R205 4.7K
S103-6
VR101 10K(B)
C301 10.47
C208 K0.001
R210 15K
R110 15K
C108 K0.001
R208 2.2K
R108 2.2K
R107 1.5K
R207 1.5K
Q307 (2SC3311RTA) SWITCHING
Q202 (2SC1740SLNS) AF AMP
R215 68K
R115 68K
R116 150K
R216 150K
R213 1.8K
R113 1.8K
R115 15K
R215 15K
S101-3
R118 470K
Q102
C112 50V1
C113 K470P
R120 150
C115 25V3.3
L101
D101 (RVDISS133) SWITCHING (DOLBY NR)
IC302 (RVILM1131C) DOLBY NR AMP
C306 6.3V220
Q102 (2SC1740SLNS) AF AMP
Q101
Q101 (2SC3311RTA) AGC
Q301 (2SC3311RTA) AGC
R119 2.7K
S102
R302 4.7K
D101
IC302
R303 100
Q301
R219 2.7K
C303 10V220
R218 470K
C215 25V3.3
L201
C212 50V1
Q202
C213 K470P
R220 150
Q302
Q302 (RVTDTC114TS) SWITCHING
S101-4
Q201
Q201 (2SC3311RTA) AGC
D201
C305 10V470
C307 16V10
R305 10M
S104-2
S104-10
D201 (RVDISS133) SWITCHING(DOLBY NR)
D301 R362 10K
D301 (RVDISS133) SWITCHING (MIC +B)
R306 100
C228 M0.047
R228 1K
C128 M0.047
R128 1K
D103
D103 (MA175WK) SWITCHING
D102 (MA175WA) SWITCHING
D102
S104-7
C125 K0.033
C125 K0.033
C127 25V4.7
C227 25V4.7
S104-6
C310 6.3V470
Q104 (2SD1468SR) MUTING
S101-5
R142 1K
R143 33K
Q104
C144 K330P
Q204 (2SD1450S) MUTING
S101-6
R242 1K
R243 33K
Q204
C244 K330P
R145 3.9K
R144 47K
C249 50V033
R244 47K
R308 2.2K
R307 2.2K
Q313 (RVTDTA1 SWITCH
Q315 (RVTDTC11 SWITCH
Q313
Q315
Q316
R370 100K
C370 50V2.2
D302
D302 (RVDISS133) SWITCHING
D306 (RVDISS133) SWITCHING
C368 10V 470
D306
R379 150K
R371 10K
R372 10K
TO G,E & CIRCU
Rch OUT
Lch OUT
+B
Rch IN
S104-5
Q305 (2SD1449STA) SWITCHING (BEAT PROOF)
L302
C339 50V2.2
VR301 10K(B)
S103-1
R338 2.2K
L301
R332 1K
C333 J0.0027
C335 10V22
C336 10V220
R337 100
C337 M0.0033
Q306
R341 3.3K
TH301
R339 4.7K
Q305
R335 47K
C332 Z0.01
C338 M0.047
R340 3.3
Q306 (2SC2001KITA) BIAS OSC
R342 1.5K
Q307
R343 2.2K
R361 22K
Q314
Q314 (RVTDTC114TS) SWITCHING
BUILT-IN MICROPHONE
R345 3.3K
R360 4.7K
R358 150
C340 M0.022
C342 10V100
R348 3.3K
R347 680K
C346 50V1
R351 10K
C348 50V1
R353 680K
R355 2.2K
C351 50V1
Q310
Q331
C343 50V0.1
C347 M0.022
C350 M0.001
R356 47
R397 3.9K
C388 16V22
R398 100K
J1 MIXING EXT MIC 5mV/ 200~600Ω
R346 4.7K
C341 M0.01
Q308
R350 47
C345 M0.001
R352 12K
Q309
R357 4.7K
C352 50V2.2
Q331 (2SC3311RTA) REGULATOR
Q308 (2SC1740SLNS) MIC AMP
Q309 (2SD1468SR) SWITCHING
Q310 (2SC1740SLNS) MIC AMP
C308 10V220
C237 K0.001
R240 2.2K
C232 50V1
R233 4.7K
R232 680K
C230 50V1
R238 1.5K
C233 16V10
Q203
C236 M0.022
R237 4.7K
R236 100K
L202
C235 J0.018
R234 100
R235 820
R231 33K
C231 M0.047
VR202 200K(B)
S103-3
R140 2.2K
C132 50V1
C137 K0.001
R138 1.5K
C133 16V10
R133 4.7K
R132 680K
C130 50V1
C136 M0.022
R137 4.7K
R136 100K
L102
C135 J0.018
R134 100
R135 820
Q103
R131 33K
C131 M0.047
VR102 200K(B)
S103-4
Q203 (2SC3311RTA) REC AMP
Q103 (2SC3311RTA) REC AMP
CP501
D504 (LN249RPHCF) FM ST IND
D504
S508 S507 S506
LCD
CP503
CP504
TO CD CIRCUIT
TO CD CIRCUIT

SCHEMATIC DIAGRAM (MAIN SEC



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12
13
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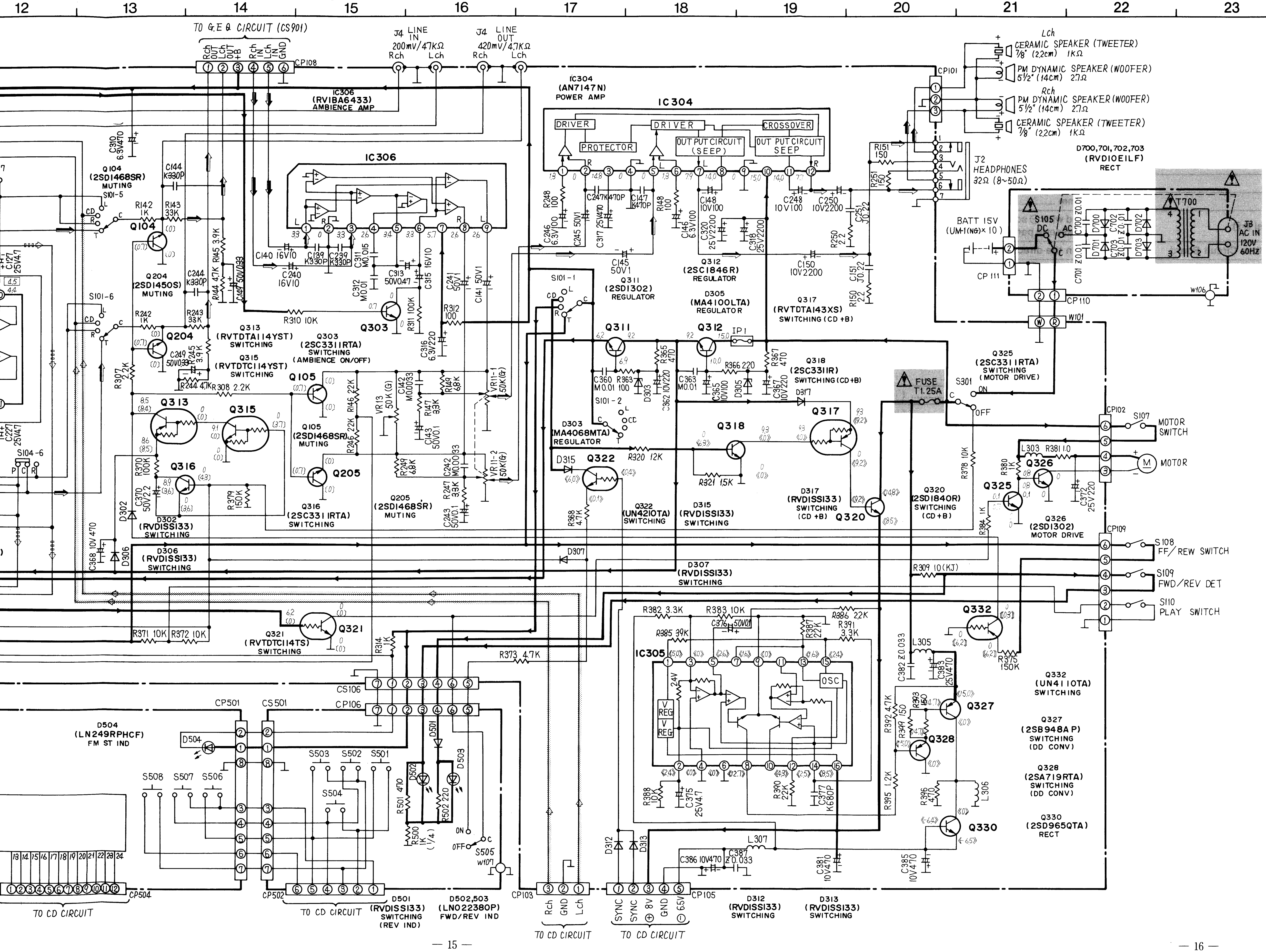
A
B
C
D
E
F
G
H
I
TO RADIO CIRCUIT (W1)
LED
R ch
GND
L ch
B.P
+B
AMB
CS107
TO G.E.Q CIRCUIT
Rch OUT
Lch OUT
+B
Rch IN
Lch
C110 50V1
C210 50V1
C211 M0.033
C111 M0.033
R112 10K
R212 10K
R111 1K
R211 1K
R215 68K
R115 68K
R116 150K
R216 150K
IC301
(RVIBA328)
PRE/EQ AMP
CH1
CH2
R/P HEAD
L ch
R ch
ERASE HEAD
CP104
S104-4
S104-9
S104-3
S104-8
S104-5
S104-2
S104-10
S104-6
S104-7
C101 50V1
C201 50V1
C102 K220P
C103 470P
R101 100K
C105 25V3.3
C302 10V100
R201 100K
C203 470P
C202 K470P
C205 25V3.3
C390 220P
C106 6.3V47
C107 K0033
R102 100
R103 3.9K
R105 4.7K
R301 220
C206 6.3V47
R202 100
C207 K0033
R203 3.9K
VR201 10K(B)
R205 4.7K
S103-5
S103-6
VR101 10K(B)
R208 2.2K
R108 2.2K
R107 1.5K
R207 1.5K
C208 K0.001
R210 15K
R110 15K
C108 K0.001
C301 J0.47
S101-3
S101-4
S101-5
S101-6
C112 50V1
C113 K470P
Q102
R118 470K
C115 25V3.3
L101
Q102 (2SC1740SLNS) AF AMP
R120 150
R119 2.7K
R213 1.8K
R113 1.8K
R117 1.5K
R217 1.5K
Q101
Q101 (2SC3311RTA) AGC
Q301 (2SC3311RTA) AGC
R302 4.7K
S102
IN
OUT
R303 100
R219 2.7K
C303 10V220
Q301
R218 470K
C215 25V3.3
L201
C212 50V1
Q202
Q302
Q201
Q201 (2SC3311RTA) AGC
C213 K470P
R220 150
Q302 (RVTDTC114TS) SWITCHING
D101 (RVDISS133) SWITCHING (DOLBY NR)
IC302 (RVILM1131C) DOLBY NR AMP
IC302
C306 6.3V220
R121 1.2K
C117 50V0.1
R122 68K
R123 270K
C118 50V0.33
C121 16V10
R126 33K
R127 4.7K
C125 K0.033
C123 3300P
C126 25V4.7
C127 25V4.7
C116 16V10
C120 K0.047
C122 K0.0047
R125 47K
D101
D201
C216 16V10
R221 1.2K
R222 68K
R223 270K
C217 50V0.1
C218 50V0.33
C220 K0.047
C221 16V10
R225 47K
R226 33K
C222 K0.0047
C223 3300P
R227 4.7K
C225 K0.033
C226 25V4.7
C227 25V4.7
C305 10V470
C307 16V10
R305 10M
C228 M0.047
R228 1K
C128 M0.047
R128 1K
D103
D102
D103 (MA175WK) SWITCHING
D102 (MA175WA) SWITCHING
Q307 (2SC3311RTA) SWITCHING
Q202 (2SC1740SLNS) AF AMP
Q305 (2SD1449STA) SWITCHING (BEAT PROOF)
L302
L301
C339 50V2.2
R338 2.2K
VR301 10K(B)
S103-1
R342 1.5K
Q307
R343 2.2K
R337 100
C337 M00033
Q306
R341 3.3K
R339 4.7K
TH301
C336 10V220
C338 M0.047
R340 3.3
Q306 (2SC2001KITA) BIAS OSC
C333 J0.0027
C335 J0.022
R332 1K
Q305
R335 4.7K
C332 Z0.01
R306 100
R361 22K
Q314
Q314 (RVTDTC114TS) SWITCHING
R360 4.7K
R358 150
D201 (RVDISS133) SWITCHING(DOLBY NR)
D301
R362 10K
D301 (RVDISS133) SWITCHING (MIC +B)
BUILT-IN MICROPHONE
R345 3.3K
C340 M0.022
C342 10V100
R348 3.3K
R347 680K
C346 50V1
R351 10K
C348 50V1
R353 680K
R355 2.2K
C351 50V1
Q310
Q331
C343 50V0.1
R346 4.7K
C341 M0.01
Q308
C345 M0.001
R350 47
C347 M0.0022
C350 M0.001
R356 47
Q309
R352 12K
C352 50V2.2
R357 4.7K
R397 39K
C388 16V22
R398 100K
Q308 (2SC1740SLNS) MIC AMP
Q309 (2SD1468SR) SWITCHING
Q310 (2SC1740SLNS) MIC AMP
Q331 (2SC3311RTA) REGULATOR
J1 MIXING EXT MIC 5mV/ 200~600Ω
C308 10V220
C237 K0.001
R240 2.2K
C232 50V1
R233 4.7K
R232 680K
C230 50V1
R238 1.5K
C233 16V10
C236 M0.022
R237 4.7K
R236 100K
L202
Q203
R231 33K
VR202 200K(B)
C235 J0.018
R234 100
R235 820
C231 M0.047
S103-3
R140 2.2K
C132 50V1
R133 4.7K
R132 680K
C130 50V1
C137 K0.001
R138 1.5K
C133 16V10
C136 M0.022
R137 4.7K
R136 100K
L102
Q103
VR102 200K(B)
C135 J0.018
R134 100
R135 820
C131 M0.047
R131 33K
S103-4
Q203 (2SC3311RTA) REC AMP
Q103 (2SC3311RTA) REC AMP
C310 6.3V470
Q104 (2SD1468SR) MUTING
R142 1K
R143 33K
Q104
C144 K330P
R145 3.9K
R144 4.7K
C145 50V033
Q204 (2SD1450S) MUTING
R242 1K
R243 33K
Q204
C244 K330P
C249 50V033
R245 3.9K
R244 4.7K
R308 2.2K
R307 2.2K
Q313 (RVTDTA114) SWITCHING
Q315 (RVTDTC114) SWITCHING
Q313
Q315
Q316
R370 100K
C370 50V2.2
R379 150K
D302
D302 (RVDISS133) SWITCHING
D306
D306 (RVDISS133) SWITCHING
C368 10V470
R371 10K
R372 10K
CP501
D504 (LN249RPHCF) FM ST IND
D504
S508
S507
S506
LCD
CP503
CP504
TO CD CIRCUIT
TO CD CIRCUIT

C DIAGRAM (MAIN SECTION)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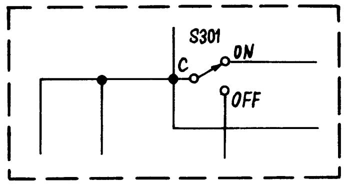
25
TO G.E.Q CIRCUIT (CS901)
Rch OUT
Lch OUT
+B
Rch IN
Lch IN
GND
CP108
J4 LINE IN 200mV/47KΩ Rch Lch
J4 LINE OUT 420mV/47KΩ Rch Lch
IC306 (RVIBA6433) AMBIENCE AMP
IC304 (AN7147N) POWER AMP
IC304
DRIVER
PROTECTOR
DRIVER
OUT PUT CIRCUIT (SEEP)
CROSSOVER
OUT PUT CIRCUIT SEEP
IC306
Lch CERAMIC SPEAKER (TWEETER) 7/8" (22cm) 1KΩ
PM DYNAMIC SPEAKER (WOOFER) 5 1/2" (14cm) 27Ω
Rch PM DYNAMIC SPEAKER (WOOFER) 5 1/2" (14cm) 27Ω
CERAMIC SPEAKER (TWEETER) 7/8" (22cm) 1KΩ
CP101
J2 HEADPHONES 32Ω (8~50Ω)
R151 150
R251 150
D700,701,702,703 (RVD10E1LF) RECT
BATT 15V (UM-1(NG)×10)
S105 DC AC
T700
J3 AC IN 120V 60Hz
CP111
CP110
W106
W101
Q104 (2SD1468SR) MUTING
S101-5
R142 1K
R143 33K
C144 K330P
C310 6.3V470
Q204 (2SD1450S) MUTING
C244 K330P
S101-6
R242 1K
R243 33K
Q204
C249 50V0.33
R245 3.9K
R244 4.7K
R307 2.2K
R308 2.2K
Q313 (RVTDTA114YST) SWITCHING
Q315 (RVTDTC114YST) SWITCHING
Q303 (2SC3311RTA) SWITCHING (AMBIENCE ON/OFF)
Q303
R310 10K
R311 100K
R312 100
C316 6.3V220
C312 M0.01
C313 50V0.47
C315 16V10
C241 50V1
C141 50V1
C140 16V10
C240 16V10
C139 K330P
C239 K330P
C311 M0.015
Q105
Q105 (2SD1468SR) MUTING
Q205
Q205 (2SD1468SR) MUTING
VR13 50K(G)
C142 M0.0033
R147 33K
R149 68K
VR11-1 50K(G)
VR11-2 50K(G)
R146 22K
R246 22K
R249 68K
R247 33K
C143 50V0.1
C242 M0.0033
C243 50V0.1
Q313
Q315
Q316
Q316 (2SC3311RTA) SWITCHING
R370 100K
C370 50V2.2
R379 150K
D302
D302 (RVDISS133) SWITCHING
C368 10V470
D306
D306 (RVDISS133) SWITCHING
Q321 (RVTDTC114TS) SWITCHING
R371 10K
R372 10K
R314 1K
S101-1
Q311
Q311 (2SD1302) REGULATOR
Q312
Q312 (2SC1846R) REGULATOR
D305 (MA4100LTA) REGULATOR
IP1
R366 220
R365 470
R367 470
C360 M0.01
R363 100
D303
C362 10V220
C363 M0.01
C365 10V100
D305
C367 10V220
S101-2
D303 (MA4068MTA) REGULATOR
D315
Q322
Q322 (UN4210TA) SWITCHING
R320 12K
R368 4.7K
D307
D307 (RVDISS133) SWITCHING
Q318
R321 15K
D315 (RVDISS133) SWITCHING
Q318 (2SC3311R) SWITCHING (CD+B)
D317
Q317
Q317 (RVTDTA143XS) SWITCHING (CD+B)
D317 (RVDISS133) SWITCHING (CD+B)
Q320
Q320 (2SD1840R) SWITCHING (CD+B)
R248 100
C246 6.3V100
C245 50V1
C247 K470P
C317 25V470
C147 K470P
R148 100
C145 50V1
C146 6.3V100
C148 10V100
C320 25V2200
C318 25V2200
C248 10V100
C250 10V2200
C251 J0.22
R250 2.2
C150 10V2200
C151 J0.22
R150 2.2
FUSE T1.25A
S301 ON OFF
R378 10K
Q325 (2SC3311RTA) SWITCHING (MOTOR DRIVE)
Q325
Q326
Q326 (2SD1302) MOTOR DRIVE
L303
R381 10
R380 1K
C372 25V220
R384 1K
CP102
S107 MOTOR SWITCH
MOTOR
CP109
S108 FF/REW SWITCH
S109 FWD/REV DET
S110 PLAY SWITCH
R309 10(KJ)
Q332
R375 150K
Q332 (UN4110TA) SWITCHING
L305
C382 Z0.033
C383 25V470
R392 4.7K
R393 150
R399 150
Q327
Q328
Q327 (2SB948AP) SWITCHING (DD CONV)
Q328 (2SA719RTA) SWITCHING (DD CONV)
R395 1.2K
R396 470
L306
Q330
Q330 (2SD965QTA) RECT
C385 10V470
IC305
R382 3.3K
R383 10K
R385 39K
C376 50V01
R387 22K
R386 22K
R391 3.3K
24V
V REG
V REG
OSC
R388 10K
C375 25V4.7
R390 22K
C377 K680P
R373 4.7K
CS106
CP106
CP501
CS501
D504 (LN249RPHCF) FM ST IND
D504
S503
S502
S501
S508
S507
S506
S504
D501
D502
D503
R501 470
R500 1K (1/4)
R502 220
S505
W107
ON
OFF
CP504
TO CD CIRCUIT
CP502
TO CD CIRCUIT
D501 (RVDISS133) SWITCHING (REV IND)
D502,503 (LN022380P) FWD/REV IND
CP103
Rch
GND
Lch
TO CD CIRCUIT
CP105
SYNC
SYNC
⊕ 8V
GND
⊖ 65V
TO CD CIRCUIT
D312
D313
L307
C386 10V470
C387 Z0.033
C381 10V470
D312 (RVDISS133) SWITCHING
D313 (RVDISS133) SWITCHING
13 14 15 16 17 18 19 20 21 22 23 24

(B Type)


S301
C
ON
OFF

■ SCHEMATIC DIAGRAM (MAIN SECTION)

Notes:

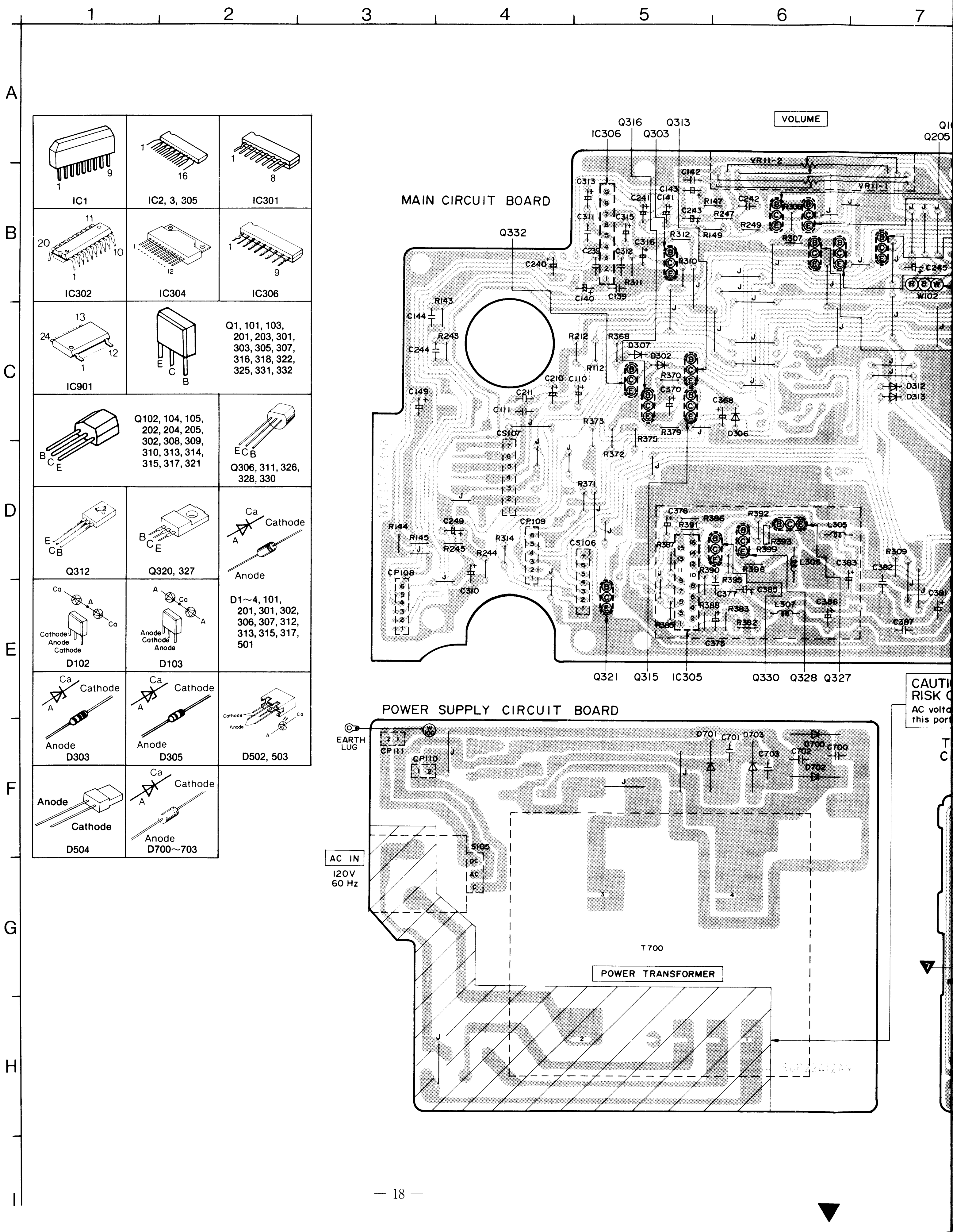
1. S101-1~S101-6 : Function selector switch in "Tape" position. (L...Line, CD...CD, R...Radio, T...Tape)
2. S102 : Dolby NR switch in "Out" position.
3. S103-1, S103-3~S103-6 : Tape selector switch in "Normal" position. (N...Normal, Cr...CrO_2)
4. S104-2~S104-10 : Record/Playback switch in "Playback" position. (R...Record, P...Playback)
5. S105 : AC/DC select switch in "DC" position.
6. S107 : Motor switch in "OFF" position.
7. S108 : FF/REW switch in "OFF" position.
8. S109 : FWD/REY DET switch in "OFF" position.
9. S110 : Play switch in "OFF" position.
10. S301 : Power switch in "OFF" position.
11. S501 : Play/Pause switch in "OFF" position.
12. S502 : FF skip/Search switch in "OFF" position.
13. S503 : REW skip/Search switch in "OFF" position.
14. S504 : Stop/Clear switch in "OFF" position.
15. S505 : Synchro record switch in "OFF" position.
16. S506 : Remaining Time switch in "OFF" position.
17. S507 : Repeat switch in "OFF" position.
18. S508 : Memory/Recall switch in "OFF" position.
19. VR11-1, 11-2 : Volume control VR.
20. VR13 : Balance control VR.
21. VR101, 201 : Playback Level adjustment VR.
22. VR102, 202 : Record/Playback gain adjustment VR.
23. VR301 : Rec Bias adjustment VR.
24. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
    [ ]...Record, No mark...Playback
    《 》...CD Play, [[ ]]...FF/REW, □...Dolby IN
25. Battery current:

No signal (FM)	136mA
No signal (AM)	122mA
Maximum output (FM)	761mA
Maximum output (AM)	719mA
Maximum output (PLAY)	1050mA
Maximum output (CrO_2 REC)	1138mA
Maximum output (CD)	1630mA

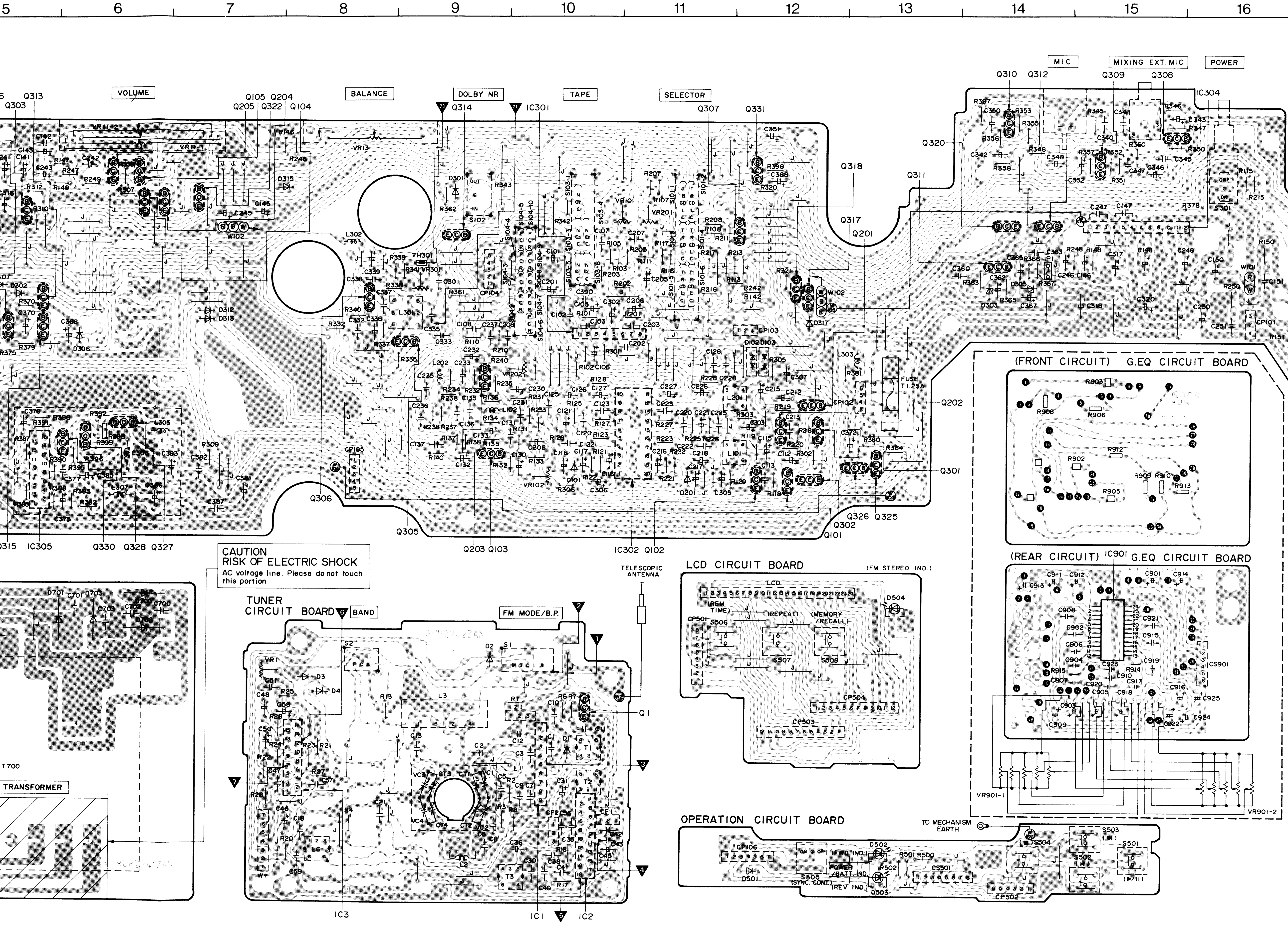
26. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
    e.g. Q1
    2SC2412NRTB, LNSTB——Production parts number
    (2SC2412)——————Supply parts number
27. The supply parts number is described alone in the replacement parts list.
28. The mark (▼) shows test point. e.g. ▼=test point 1.
29. Importantsafety notice (⚠).
    The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards.
    When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.
30. This model comes with a fuse (A type) or without a fuse (B type).
    When repairing, refer to the respective schematic diagrams.

- **This schematic diagram may be modified at any time with the development of new technology.**

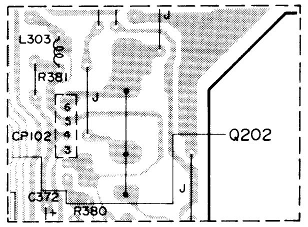
⇨ Tape (PLAY) Signal Line
⇨ Tape (RECORD) Signal Line
➡ Tape and Radio Signal Line
➡ +B Voltage Line
⇨ Audio Signal Line (CD)
⇨ Radio (FM) Signal Line


1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
1 9 IC1
1 16 IC2, 3, 305
1 8 IC301
11 20 10 1 IC302
1 12 IC304
1 9 IC306
13 24 12 1 IC901
E C B
Q1, 101, 103, 201, 203, 301, 303, 305, 307, 316, 318, 322, 325, 331, 332
B C E
Q102, 104, 105, 202, 204, 205, 302, 308, 309, 310, 313, 314, 315, 317, 321
E C B
Q306, 311, 326, 328, 330
E C B Q312
B C E Q320, 327
Ca Cathode A Anode
D1~4, 101, 201, 301, 302, 306, 307, 312, 313, 315, 317, 501
Ca A Ca Cathode Anode Cathode D102
A Ca A Anode Cathode Anode D103
Ca Cathode A Anode D303
Ca Cathode A Anode D305
Cathode Anode Ca A D502, 503
Anode Cathode D504
Ca Cathode A Anode D700~703
Q316 Q313
IC306 Q303
VOLUME
Q205
VR11-2
VR11-1
MAIN CIRCUIT BOARD
Q332
C313 C311 C241 C143 C141 C142 C243 R147 R247 C242 R249 R312 R149 C315 C316 C312 R310 R307 R311 C140 C139 C240 C245 W102
R143 C144 R243 C244 R212 R368 D307 D302 R112 R370 C370 C210 C110 C211 C111 C149 C368 D306 D312 D313
CS107 R373 R375 R379 R372 R371
R144 R145 R245 C249 R244 R314 CP109 CS106 CP108 C310
C376 R391 R386 R392 L305 R387 R393 R399 R396 L306 C383 R309 C382 R390 R395 C377 C385 C381 R388 R383 L307 C386 R385 R382 C387 C375
Q321 Q315 IC305 Q330 Q328 Q327
CAUTI
RISK
AC volt
this por
POWER SUPPLY CIRCUIT BOARD
EARTH LUG
CP111 CP110
D701 C701 D703 C703 C702 D700 C700 D702
AC IN
120V 60 Hz
S105 DC AC
T700
POWER TRANSFORMER

CIRCUIT BOARD


5
6
7
8
9
10
11
12
13
14
15
16
17
18
VOLUME
BALANCE
DOLBY NR
TAPE
SELECTOR
MIC
MIXING EXT. MIC
POWER
LINE IN
LINE OUT
HEADPHONES
FUSE T1.25A
CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not touch this portion
TRANSFORMER
T700
TELESCOPIC ANTENNA
TUNER CIRCUIT BOARD
BAND
FM MODE/B.P.
LCD CIRCUIT BOARD
(FM STEREO IND.)
LCD
(REM TIME)
(REPEAT)
(MEMORY /RECALL)
OPERATION CIRCUIT BOARD
TO MECHANISM EARTH
(FWD IND.)
POWER /BATT. IND.
(REV IND.)
(SYNC. CONT.)
(FRONT CIRCUIT) G.EQ CIRCUIT BOARD
(REAR CIRCUIT) G.EQ CIRCUIT BOARD
IC901
VR901-1
VR901-2
IC301
IC302
IC304
IC305
IC1
IC2
IC3
Q101
Q102
Q103
Q104
Q105
Q201
Q202
Q203
Q204
Q205
Q301
Q302
Q303
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q312
Q313
Q314
Q317
Q318
Q320
Q322
Q325
Q326
Q327
Q328
Q330
Q331
Q1

(B Type)

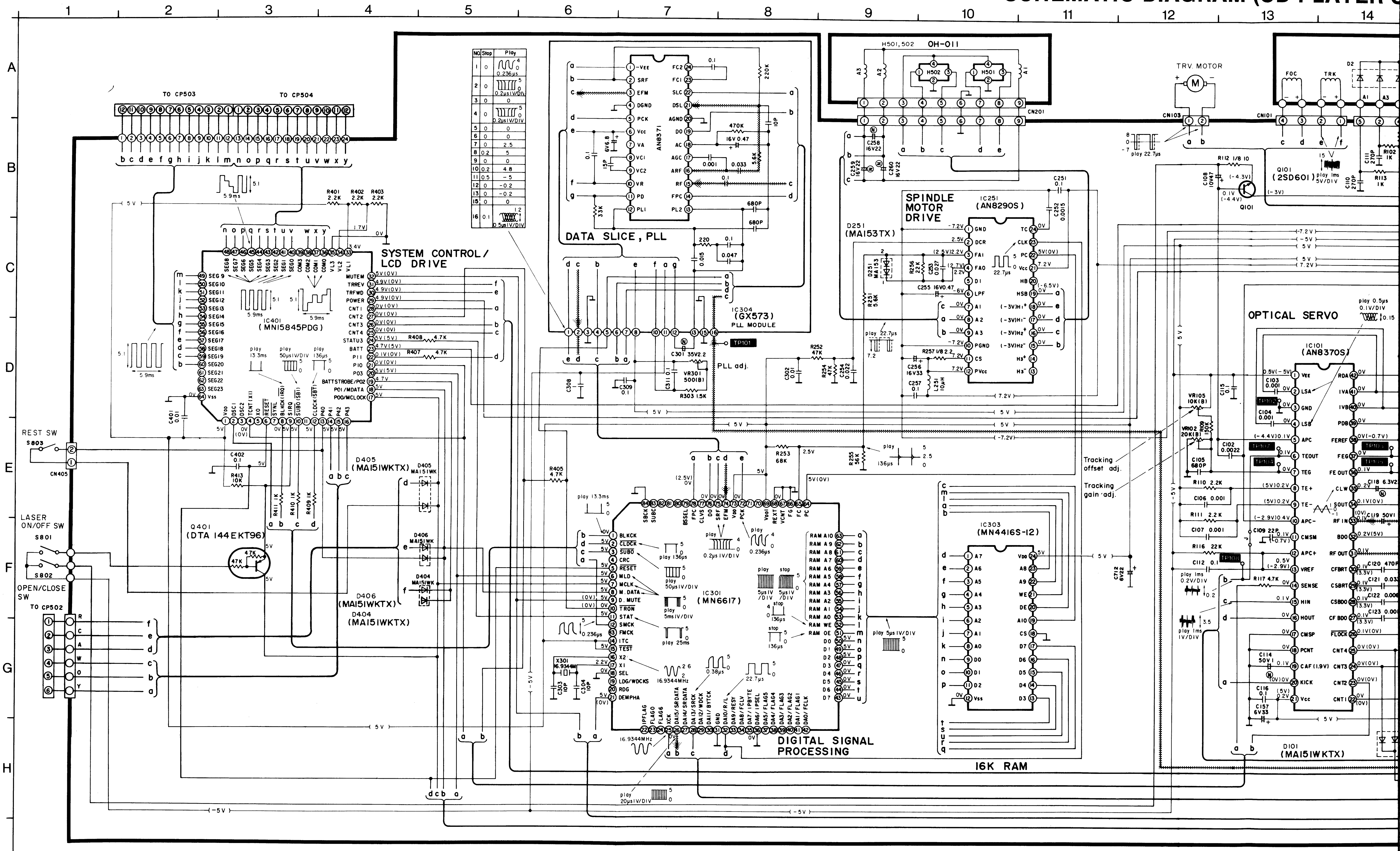

L303
R381
CP102
C372
R380
Q202

Notes:

1. The symbols (▭) shown in the circuit board indicate printed resistor.
2. The circuit shown in (▬) on the conductor indicates printed circuit on the back side of the printed circuit board.
3. The symbols (●) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.
4. The numbers in circles "●" indicate the res connection points of the front and rear circuit boards.
5. This model comes with a fuse (A type) or without a fuse (B type).
   When repairing, refer to the respective circuit board.

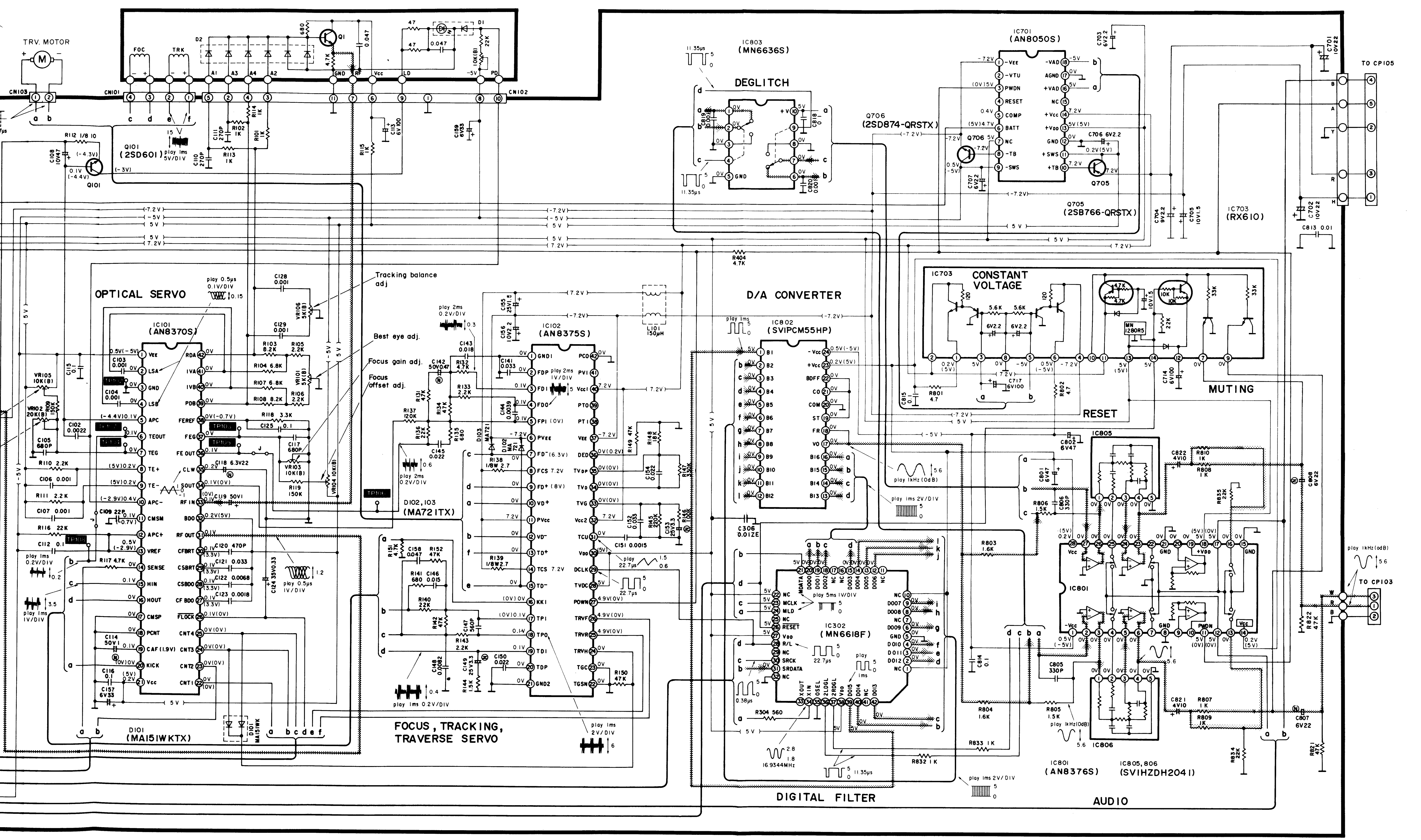
- **This circuit board diagram may be modified at any time with the development of new technology.**

SCHEMATIC DIAGRAM (CD PLAYER S


TO CP503
TO CP504
SYSTEM CONTROL / LCD DRIVE
IC401 (MN15845PDG)
DATA SLICE, PLL
AN8371
IC304 (GX573) PLL MODULE
PLL adj.
TP101
H501, 502 OH-011
H502
H501
CN201
TRV. MOTOR
CN103
CN101
FOC
TRK
Q101 (2SD601)
SPINDLE MOTOR DRIVE
IC251 (AN8290S)
D251 (MA153TX)
OPTICAL SERVO
IC101 (AN8370S)
Tracking offset adj.
Tracking gain adj.
VR105 10K(B)
VR102 20K(B)
REST SW
S803
CN405
LASER ON/OFF SW
S801
S802
OPEN/CLOSE SW
TO CP502
Q401 (DTA 144EKT96)
D405 (MA151WKTX)
D406 (MA151WKTX)
D404 (MA151WKTX)
IC301 (MN6617)
DIGITAL SIGNAL PROCESSING
IC303 (MN4416S-12)
16K RAM
X301 16.9344M
D101 (MA151WKTX)

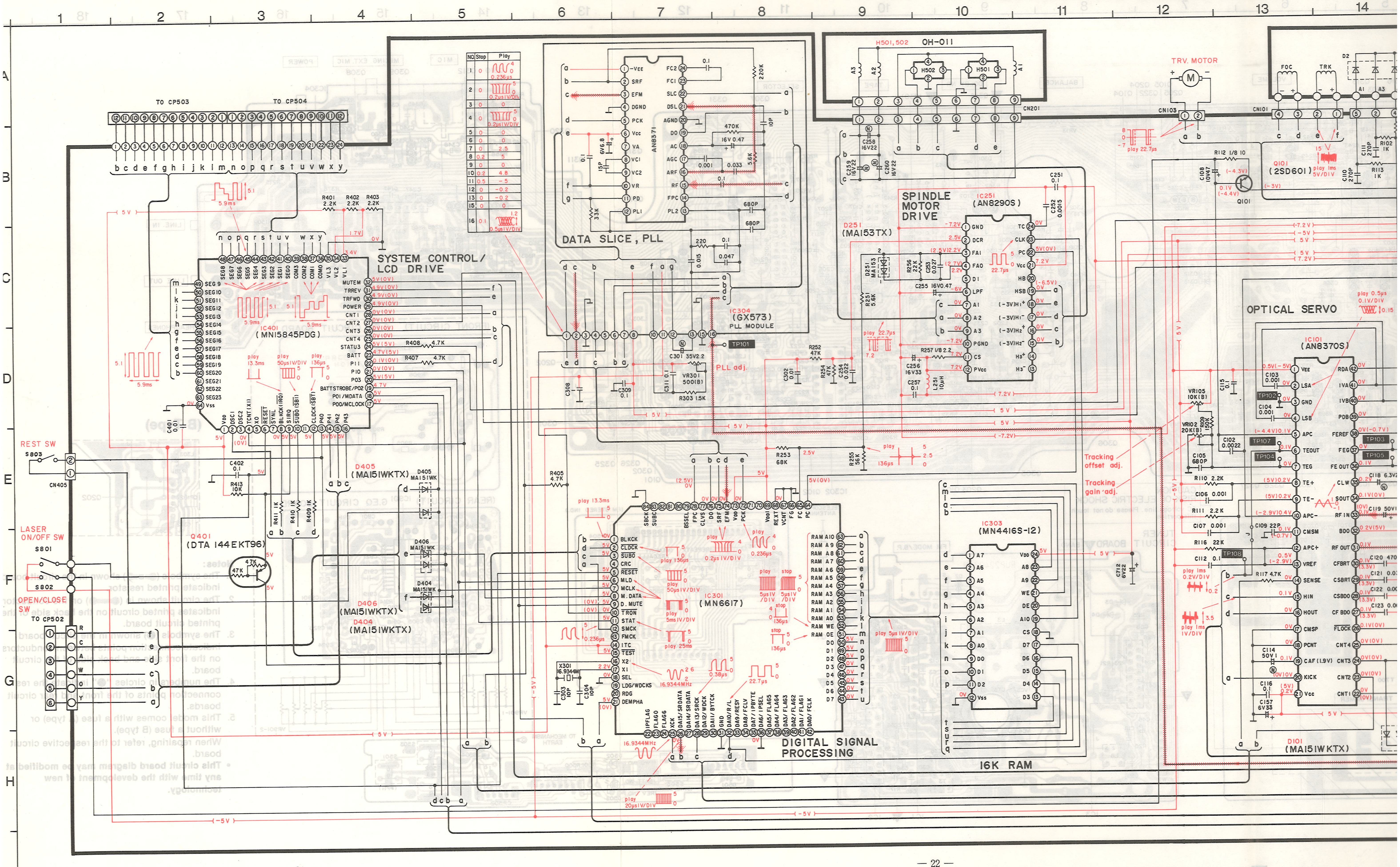
No.	Stop	Play
1	0	4 0 0.236µs
2	0	5 0 0.2µs1V/DIV
3	0	0
4	0	5 0 0.2µs1V/DIV
5	0	0
6	0	0
7	0	2.5
8	0.2	5
9	0	0
10	0.2	4.8
11	0.5	-5
12	0	-0.2
13	0	-0.2
15	0	0
16	0.1	1.2 0.5µs1V/DIV

IAGRAM (CD PLAYER SECTION)

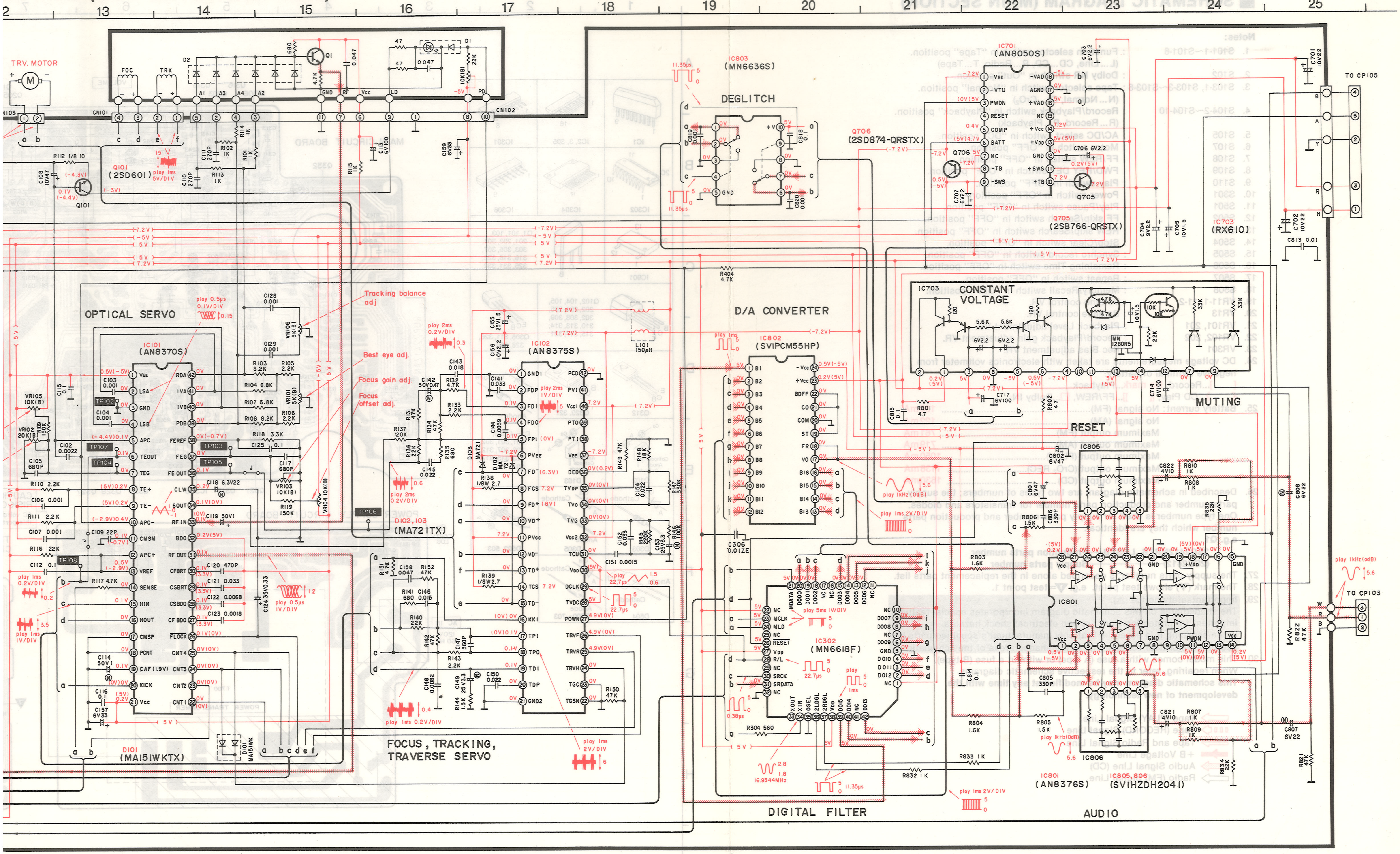


12
13
14
15
16
17
18
19
20
21
22
23
24
25
TRV. MOTOR
CN103
CN101
CN102
FOC
TRK
D2
Q1
D1
Q101
(2SD601)
OPTICAL SERVO
IC101
(AN8370S)
Tracking balance adj
Best eye adj.
Focus gain adj.
Focus offset adj.
IC102
(AN8375S)
D102, 103
(MA721TX)
D101
(MA151WKTX)
FOCUS, TRACKING,
TRAVERSE SERVO
L101
150μH
IC803
(MN6636S)
DEGLITCH
D/A CONVERTER
IC802
(SVIPCM55HP)
IC302
(MN6618F)
DIGITAL FILTER
IC701
(AN8050S)
Q706
(2SD874-QRSTX)
Q705
(2SB766-QRSTX)
IC703
(RX610)
IC703
CONSTANT
VOLTAGE
MUTING
RESET
IC805
IC801
IC806
IC801
(AN8376S)
IC805, 806
(SVIHZDH2041)
AUDIO
TO CP105
TO CP103
play 1kHz (0dB)
16.9344MHz

SCHEMATIC DIAGRAM (CD PLAYER S


SYSTEM CONTROL / LCD DRIVE
IC401 (MN15845PDG)
TO CP503
TO CP504
DATA SLICE, PLL
AN8371
IC304 (GX573) PLL MODULE
PLL adj.
H501,502 OH-011
CN201
SPINDLE MOTOR DRIVE
IC251 (AN8290S)
D251 (MA153TX)
TRV. MOTOR
CN103
CN101
Q101 (2SD601)
OPTICAL SERVO
IC101 (AN8370S)
Tracking offset adj.
Tracking gain adj.
VR105 10K(B)
VR102 20K(B)
REST SW
S803
CN405
LASER ON/OFF SW
S801
S802
OPEN/CLOSE SW
TO CP502
Q401 (DTA 144EKT96)
D405 (MA151WKTX)
D406 (MA151WKTX)
D404 (MA151WKTX)
IC301 (MN6617)
DIGITAL SIGNAL PROCESSING
X301 16.9344M
IC303 (MN4416S-12)
16K RAM
D101 (MA151WKTX)
TP101
TP102
TP103
TP104
TP105
TP107
TP108

AGRAM (CD PLAYER SECTION)


12
13
14
15
16
17
18
19
20
21
22
23
24
25
TRV. MOTOR
FOC
TRK
CN101
CN102
Q101 (2SD601)
OPTICAL SERVO
IC101 (AN8370S)
Tracking balance adj
Best eye adj.
Focus gain adj.
Focus offset adj.
IC102 (AN8375S)
D102, 103 (MA721TX)
D101 (MA151WKTX)
FOCUS, TRACKING, TRAVERSE SERVO
L101 150μH
IC803 (MN6636S)
DEGLITCH
D/A CONVERTER
IC802 (SVIPCM55HP)
IC302 (MN6618F)
DIGITAL FILTER
16.9344MHz
IC701 (AN8050S)
Q706 (2SD874-QRSTX)
Q705 (2SB766-QRSTX)
IC703 (RX610)
IC703 CONSTANT VOLTAGE
MUTING
RESET
IC805
IC801
IC806
IC801 (AN8376S)
IC805, 806 (SVIHZDH2041)
AUDIO
TO CP105
TO CP103

■ SCHEMATIC DIAGRAM (MAIN SECTION)

Notes:

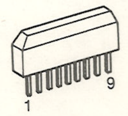
1. S101-1~S101-6 : Function selector switch in "Tape" position.
(L…Line, CD…CD, R…Radio, T…Tape)
2. S102 : Dolby NR switch in "Out" position.
3. S103-1, S103-3~S103-6 : Tape selector switch in "Normal" position.
(N…Normal, Cr…CrO_2)
4. S104-2~S104-10 : Record/Playback switch in "Playback" position.
(R…Record, P…Playback)
5. S105 : AC/DC select switch in "DC" position.
6. S107 : Motor switch in "OFF" position.
7. S108 : FF/REW switch in "OFF" position.
8. S109 : FWD/REY DET switch in "OFF" position.
9. S110 : Play switch in "OFF" position.
10. S301 : Power switch in "OFF" position.
11. S501 : Play/Pause switch in "OFF" position.
12. S502 : FF skip/Search switch in "OFF" position.
13. S503 : REW skip/Search switch in "OFF" position.
14. S504 : Stop/Clear switch in "OFF" position.
15. S505 : Synchro record switch in "OFF" position.
16. S506 : Remaining Time switch in "OFF" position.
17. S507 : Repeat switch in "OFF" position.
18. S508 : Memory/Recall switch in "OFF" position.
19. VR11-1, 11-2 : Volume control VR.
20. VR13 : Balance control VR.
21. VR101, 201 : Playback Level adjustment VR.
22. VR102, 202 : Record/Playback gain adjustment VR.
23. VR301 : Rec Bias adjustment VR.
24. DC voltage measurements are taken with electronics voltmeter from negative terminal of battery.
[ ]…Record, No mark…Playback
《 》…CD Play, [[ ]]…FF/REW, □…Dolby IN
25. Battery current:

No signal (FM)	136 mA
No signal (AM)	122 mA
Maximum output (FM)	761 mA
Maximum output (AM)	719 mA
Maximum output (PLAY)	1050 mA
Maximum output (CrO_2 REC)	1138 mA
Maximum output (CD)	1630 mA

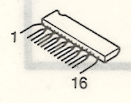
26. Described in schematic diagram are two types of numbers; the supply parts number and production parts number for transistors and diodes. One type number is used for supply parts number and production parts number which they are identical.
e.g. Q1
2SC2412NRTB, LNSTB——Production parts number
(2SC2412)——————Supply parts number
27. The supply parts number is described alone in the replacement parts list.
28. The mark (▼) shows test point. e.g. ▼1=test point 1.
29. Importantsafety notice (⚠).
The shaded area on this schematic diagram incorporates special features important for protection from fire and electrical shock hazards.
When servicing it is essential that only manufacturer's specified parts be used for the critical components in the shaded areas of the schematic.
30. This model comes with a fuse (A type) or without a fuse (B type).
When repairing, refer to the respective schematic diagrams.

- **This schematic diagram may be modified at any time with the development of new technology.**

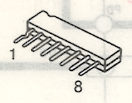
⇨ Tape (PLAY) Signal Line
▯▯▯⇨ Tape (RECORD) Signal Line
➡ Tape and Radio Signal Line
➡ +B Voltage Line
⇨ Audio Signal Line (CD)
⇨ Radio (FM) Signal Line



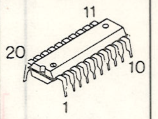
IC1



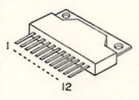
IC2, 3, 305



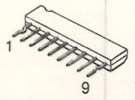
IC301



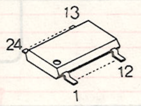
IC302



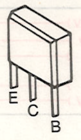
IC304



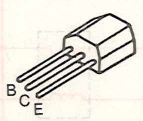
IC306



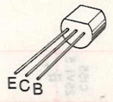
IC901



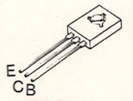
Q1, 101, 103, 201, 203, 301, 303, 305, 307, 316, 318, 322, 325, 331, 332



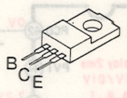
Q102, 104, 105, 202, 204, 205, 302, 308, 309, 310, 313, 314, 315, 317, 321



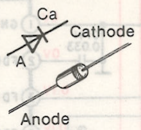
Q306, 311, 326, 328, 330

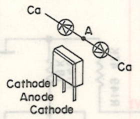


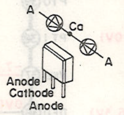
Q312

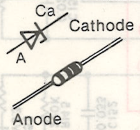


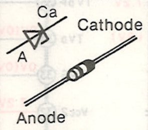
Q320, 327

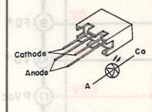

Ca
Cathode
A
Anode
D1~4, 101, 201, 301, 302, 306, 307, 312, 313, 315, 317, 501

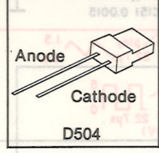

Ca
A
Ca
Cathode
Anode
Cathode
D102

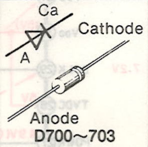

A
Ca
A
Anode
Cathode
Anode
D103

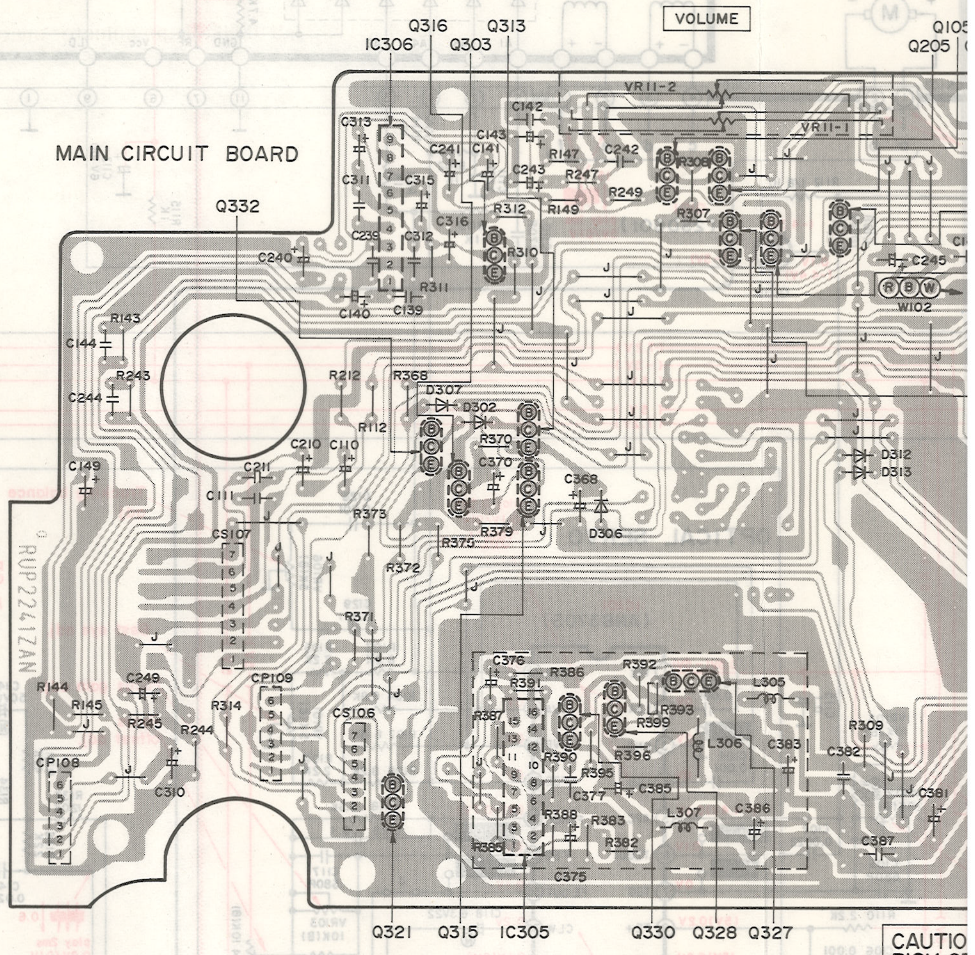

Ca
Cathode
A
Anode
D303

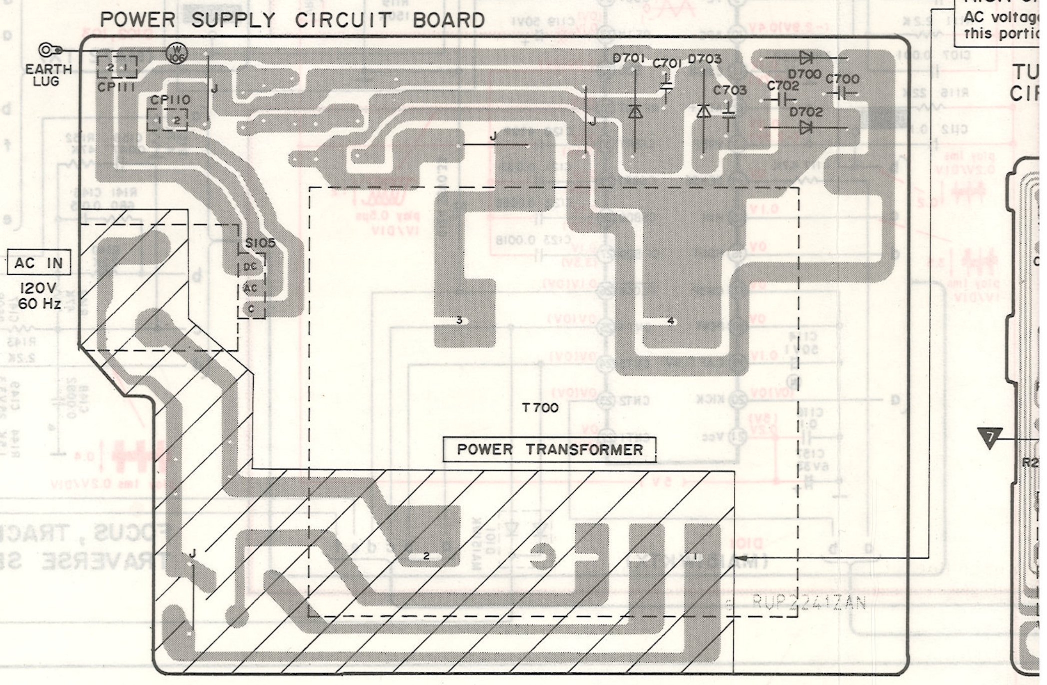

Ca
Cathode
A
Anode
D305


Cathode
Anode
Ca
A
D502, 503


Anode
Cathode
D504

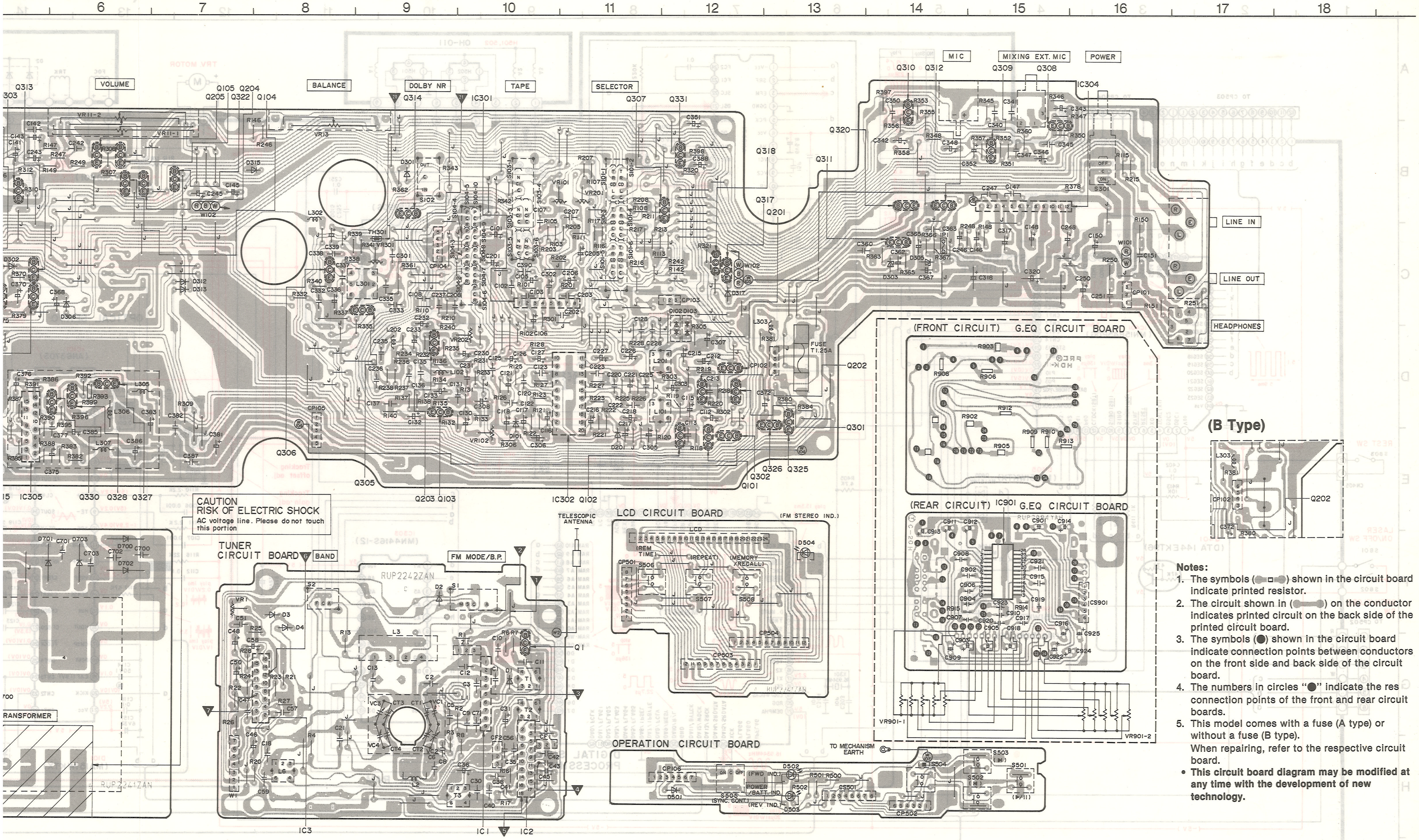

Ca
Cathode
A
Anode
D700~703


MAIN CIRCUIT BOARD
VOLUME
VR11-2
VR11-1
Q316
Q313
IC306
Q303
Q105
Q205
Q332
RUP2241ZAN
W102
Q321
Q315
IC305
Q330
Q328
Q327


POWER SUPPLY CIRCUIT BOARD
EARTH LUG
AC IN
120V
60 Hz
S105
T700
POWER TRANSFORMER
D701
C701
D703
C703
D700
C700
C702
D702
CP111
CP110
RUP2241ZAN
TU
CIR

CAUTION
RISK OF
AC voltag
this porti

CIRCUIT BOARD


6
7
8
9
10
11
12
13
14
15
16
17
18
VOLUME
BALANCE
DOLBY NR
TAPE
SELECTOR
MIC
MIXING EXT. MIC
POWER
LINE IN
LINE OUT
HEADPHONES
FUSE T1.25A
(FRONT CIRCUIT) G.EQ CIRCUIT BOARD
(REAR CIRCUIT) G.EQ CIRCUIT BOARD
VR901-1
VR901-2
(B Type)
CAUTION
RISK OF ELECTRIC SHOCK
AC voltage line. Please do not touch this portion
TELESCOPIC ANTENNA
TUNER CIRCUIT BOARD
BAND
FM MODE/B.P.
RUP2242ZAN
LCD CIRCUIT BOARD
(FM STEREO IND.)
(REM TIME)
(REPEAT)
(MEMORY XRECALL)
OPERATION CIRCUIT BOARD
TO MECHANISM EARTH
(FWD IND.)
POWER /BATT. IND.
(SYNC. CONT.)
(REV IND.)
TRANSFORMER
RUP2241ZAN
IC305
IC301
IC302
IC304
IC901
IC1
IC2
IC3

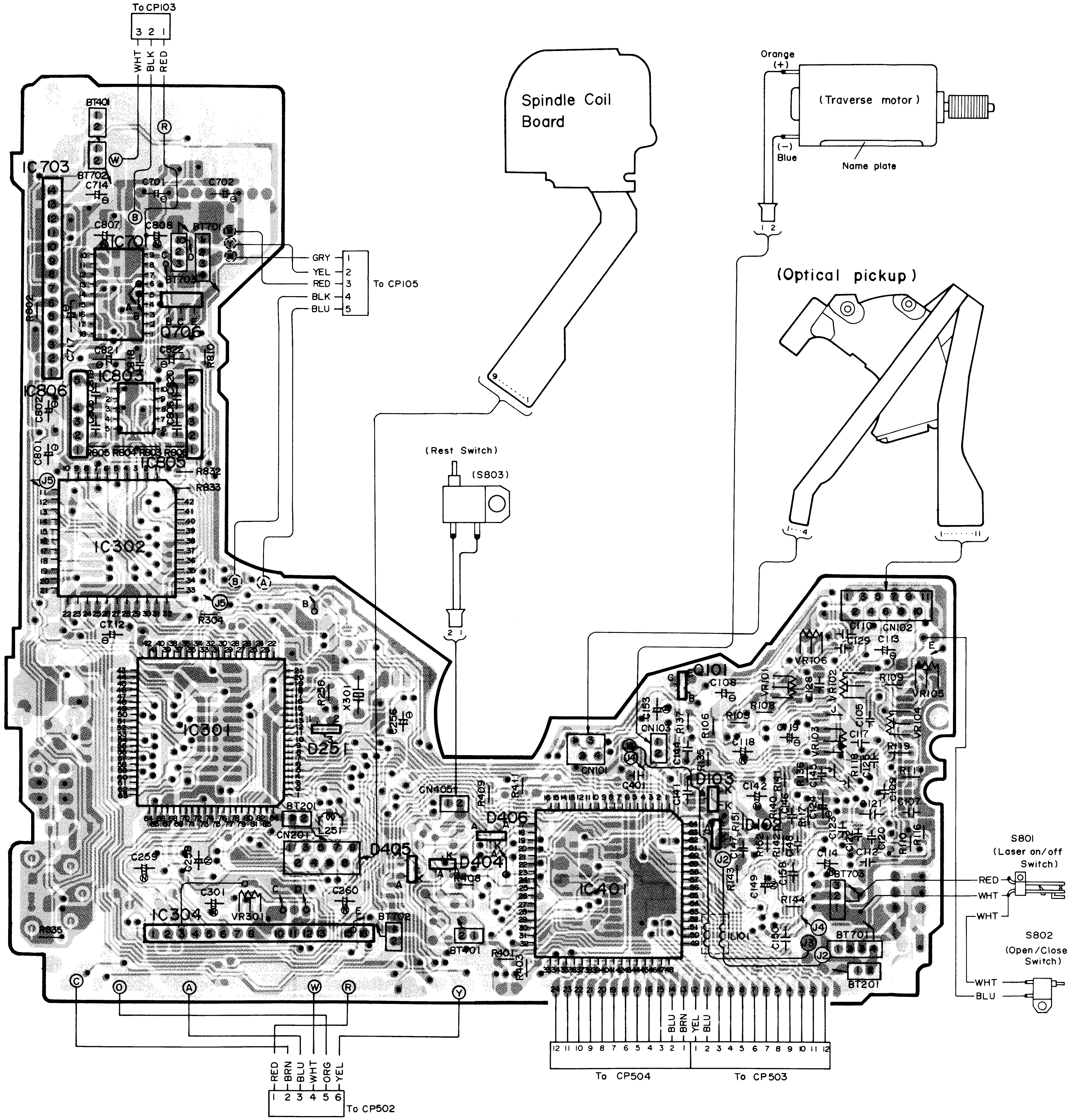
Notes:

1. The symbols (●▫●) shown in the circuit board indicate printed resistor.
2. The circuit shown in (●▬●) on the conductor indicates printed circuit on the back side of the printed circuit board.
3. The symbols (●) shown in the circuit board indicate connection points between conductors on the front side and back side of the circuit board.
4. The numbers in circles "●" indicate the res connection points of the front and rear circuit boards.
5. This model comes with a fuse (A type) or without a fuse (B type).
   When repairing, refer to the respective circuit board.

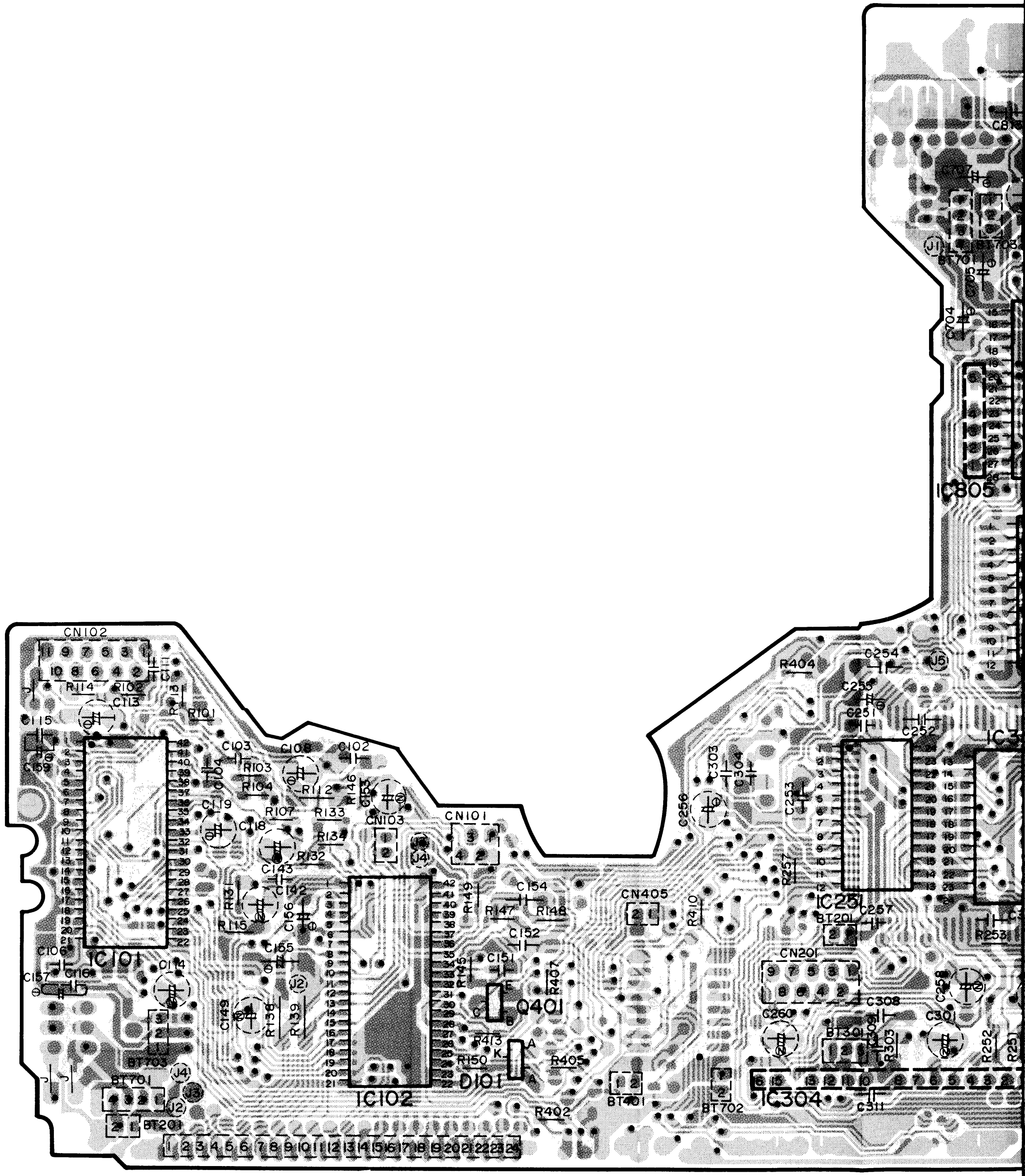
- **This circuit board diagram may be modified at any time with the development of new technology.**

■ PRINTED CIRCUIT BOARD

• **Parts side**

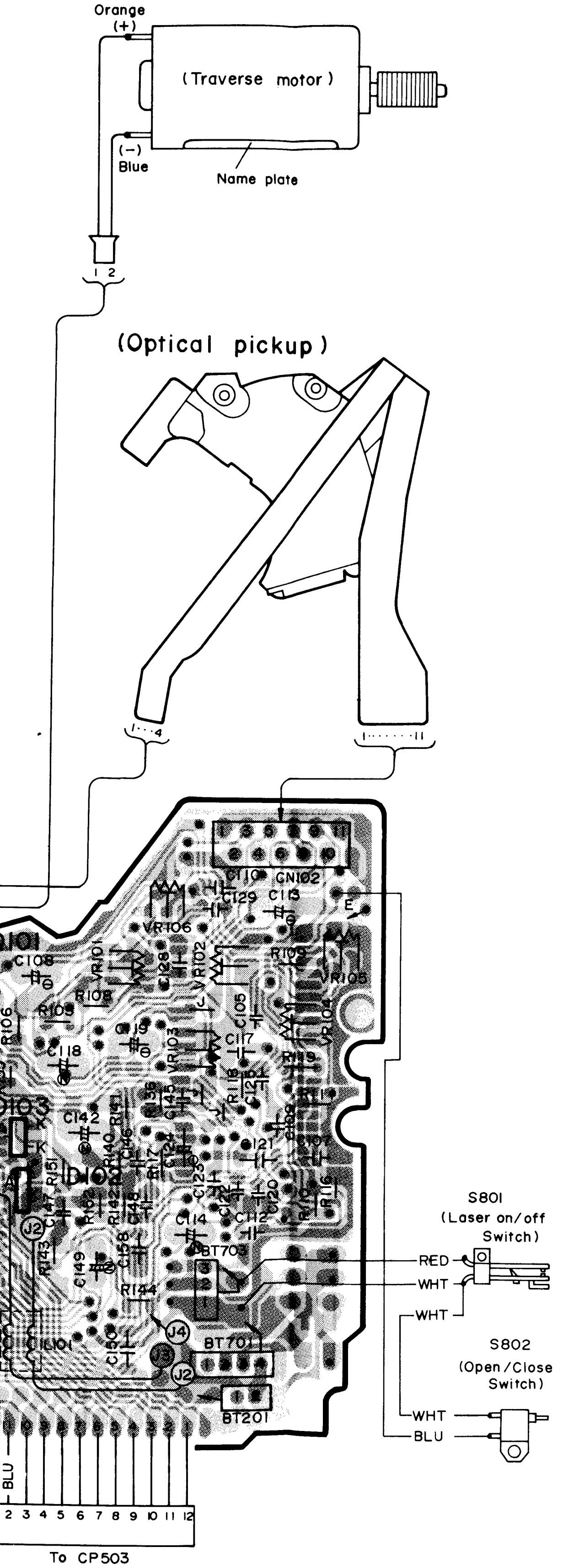


To CP103
3 2 1
WHT
BLK
RED
Spindle Coil Board
Orange
(+)
(Traverse motor)
(–)
Blue
Name plate
(Optical pickup)
GRY 1
YEL 2
RED 3
BLK 4
BLU 5
To CP105
(Rest Switch)
(S803)
S801
(Laser on/off Switch)
RED
WHT
WHT
S802
(Open/Close Switch)
WHT
BLU
IC703
IC701
IC806
IC803
IC805
IC302
IC301
IC304
IC401
Q706
D251
X301
D404
D405
D406
Q101
D103
D102
CN101
CN102
CN103
CN201
CN405
BT401
BT701
BT702
BT703
BT201
VR301
VR101
VR102
VR103
VR104
VR105
VR106
L101
L251
BLU
BRN
YEL
BLU
12 11 10 9 8 7 6 5 4 3 2 1
1 2 3 4 5 6 7 8 9 10 11 12
To CP504
To CP503
RED
BRN
BLU
WHT
ORG
YEL
1 2 3 4 5 6
To CP502

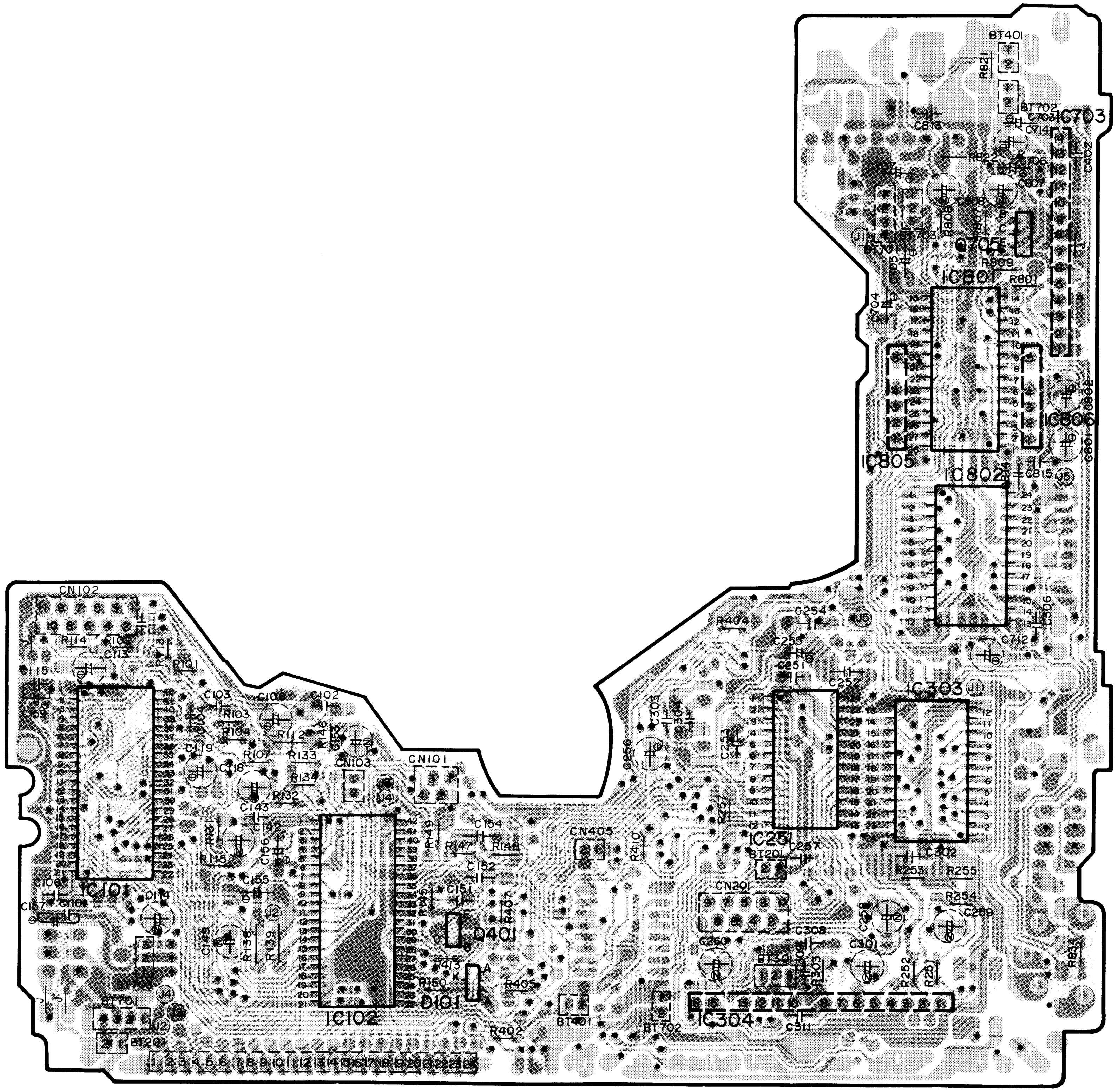


CN102
IC101
IC102
CN101
CN103
CN201
CN405
IC251
IC304
IC805
Q401
D101
BT701
BT702
BT703
BT201
BT401
R404
C254
C255
C251
C252

▼


Orange
(+)
(Traverse motor)
(−)
Blue
Name plate
1 2
(Optical pickup)
1···4
1·······11
CN102
VR101
VR102
VR104
VR105
VR106
IC101
D101
D103
BT701
BT201
S801
(Laser on/off Switch)
RED
WHT
WHT
S802
(Open/Close Switch)
WHT
BLU
BLU
2 3 4 5 6 7 8 9 10 11 12
To CP503

• Solder side


BT401
BT702
IC703
C707
BT703
Q705
IC801
IC805
IC806
IC802
CN102
IC101
IC102
CN101
CN103
Q401
D101
CN405
IC251
CN201
IC303
IC304
BT701
BT201
BT401
BT702
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

1. S801 : Laser ON/OFF switch in "**OFF**" position.
2. S802 : Open/Close switch in "**OFF**" position.
3. S803 : Rest switch in "**off**" position.
   (It turns "**on**" when optical pickup comes to innermost periphery.)
4. The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (hitg impedance) and oscillosco on the basis of GND terminal.
   Accordingly, there may arise some error in the voltage values values and waveforms depending upon the internal impedance of the tester or measuring unit.
   *The parenthesized is the voltage for test disc (1 kHz, L+R, 0 dB) in play mode, and the other, for no disc in stop mode.
5. ——— : Positive voltage line and netgative voltage line.
   ········ : Audio signal line (CD).

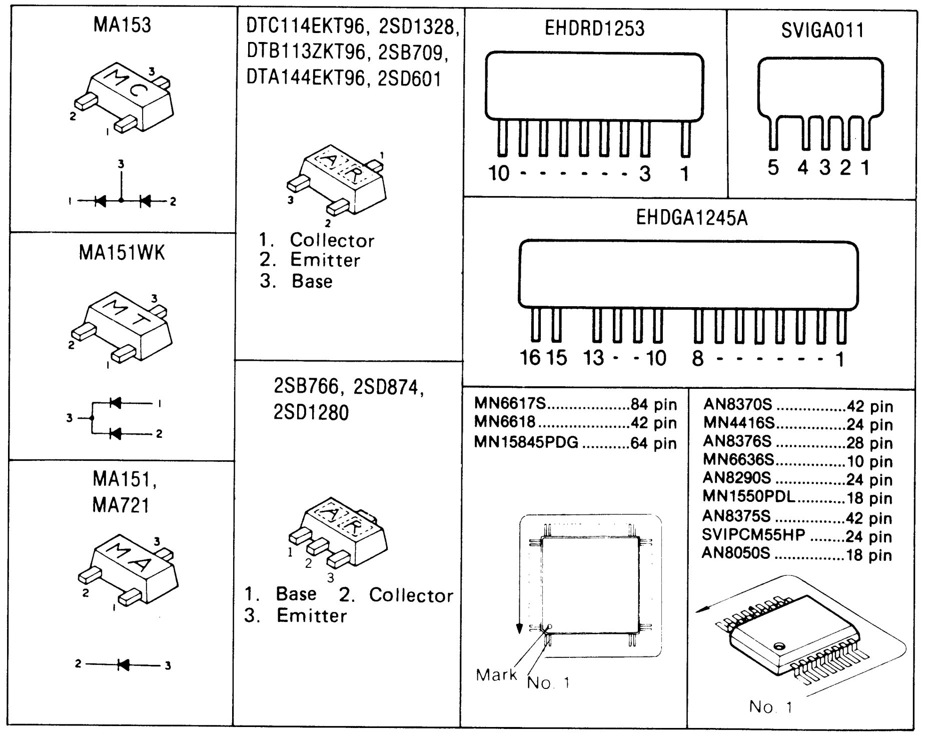
* Caution !

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

- *Cover the parts boxes made of plastics with aluminum foil.
- *Ground the soldering iron.
- *Put a conductive mat on the work table.
- *Do not touch the legs of IC or LSI with the fingers directly.

• Terminal guide of IC's, transistors and diodes

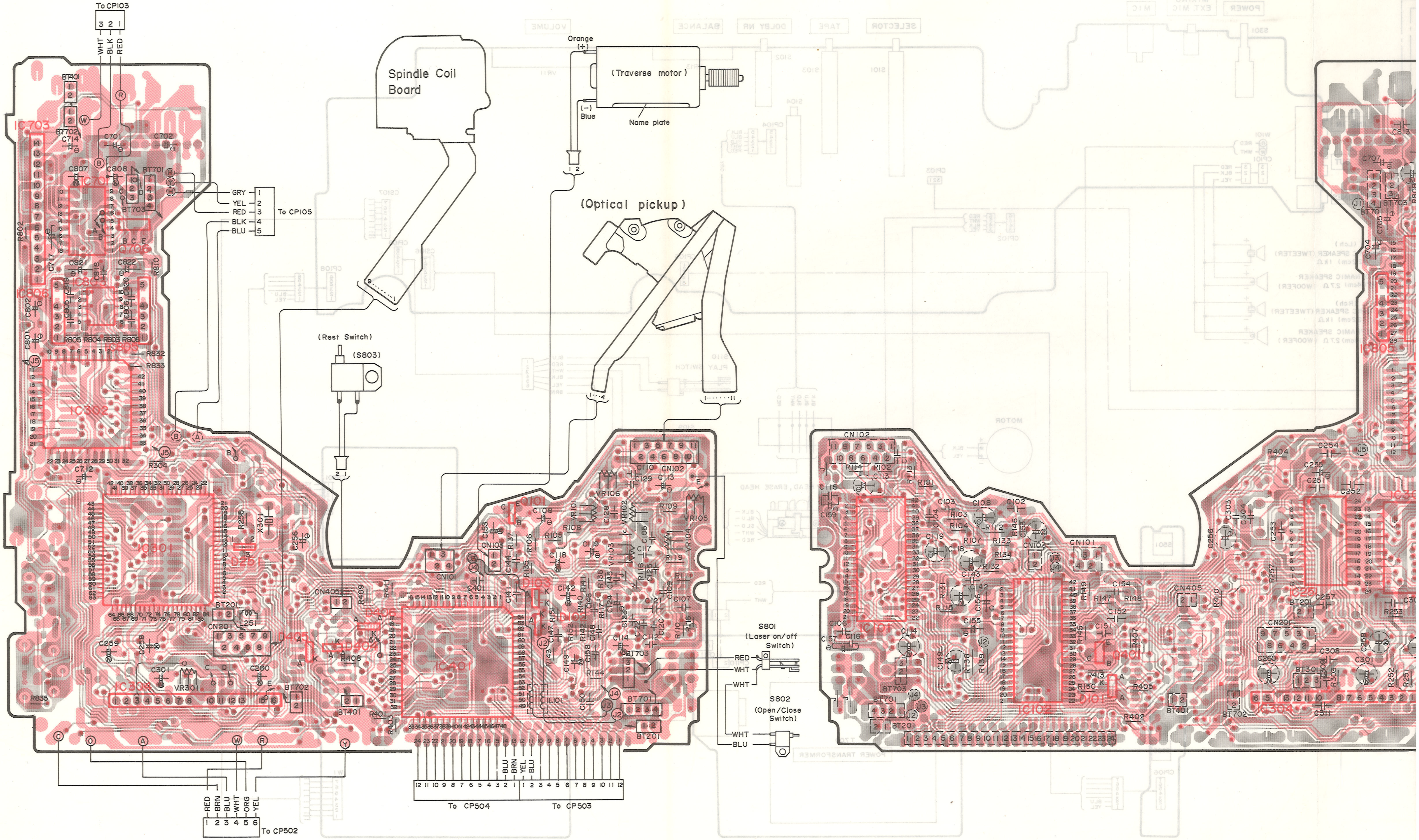

MA153
MC
1
2
3
MA151WK
MT
1
2
3
MA151,
MA721
MA
1
2
3
DTC114EKT96, 2SD1328,
DTB113ZKT96, 2SB709,
DTA144EKT96, 2SD601
AR
1
2
3
1. Collector
2. Emitter
3. Base
2SB766, 2SD874,
2SD1280
AR
1
2
3
1. Base 2. Collector
3. Emitter
EHDRD1253
10 - - - - - - - 3 1
SVIGA011
5 4 3 2 1
EHDGA1245A
16 15 13 - - 10 8 - - - - - - - 1
Mark
No. 1
No. 1

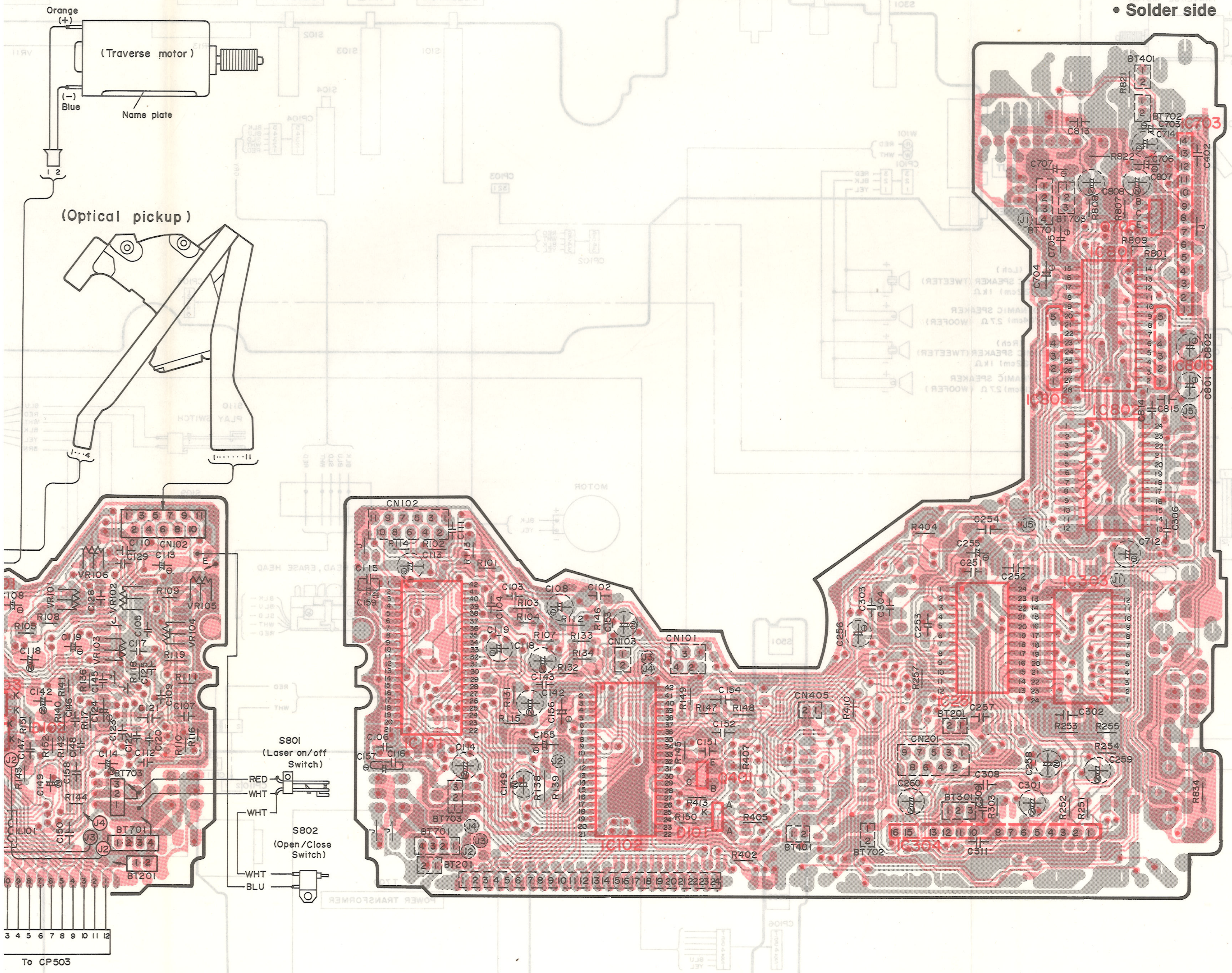
MN6617S	84 pin
MN6618	42 pin
MN15845PDG	64 pin

AN8370S	42 pin
MN4416S	24 pin
AN8376S	28 pin
MN6636S	10 pin
AN8290S	24 pin
MN1550PDL	18 pin
AN8375S	42 pin
SVIPCM55HP	24 pin
AN8050S	18 pin

PRINTED CIRCUIT BOARD

- Parts side


To CP103
WHT
BLK
RED
Spindle Coil Board
Orange (+)
(Traverse motor)
(−) Blue
Name plate
(Optical pickup)
(Rest Switch)
(S803)
GRY
YEL
RED
BLK
BLU
To CP105
S801 (Laser on/off Switch)
S802 (Open/Close Switch)
RED
WHT
BLU
IC703
IC701
IC806
IC302
IC301
IC304
IC401
IC101
IC102
IC251
IC305
CN101
CN102
CN103
CN201
CN405
BT401
BT701
BT702
BT703
BT201
VR301
VR101
VR102
VR103
VR104
VR105
VR106
X301
RED
BRN
BLU
WHT
ORG
YEL
To CP502
To CP504
To CP503


• Solder side
Orange
(+)
(Traverse motor)
(−)
Blue
Name plate
(Optical pickup)
S801
(Laser on/off Switch)
RED
WHT
WHT
S802
(Open/Close Switch)
WHT
BLU
To CP503
CN102
CN101
CN103
CN201
CN405
IC101
IC102
IC302
IC304
IC701
IC703
IC801
IC802
IC805
IC806
Q401
D101
BT401
BT701
BT702
BT703
BT201
BT301

■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

1. S801 : Laser ON/OFF switch in "**OFF**" position.
2. S802 : Open/Close switch in "**OFF**" position.
3. S803 : Rest switch in "**off**" position.
   (It turns "**on**" when optical pickup comes to innermost periphery.)
4. The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (hitg impedance) and oscillosco on the basis of GND terminal.
   Accordingly, there may arise some error in the voltage values values and waveforms depending upon the internal impedance of the tester or measuring unit.
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5. —— : Positive voltage line and netgative voltage line.
   ⇨ : Audio signal line (CD).

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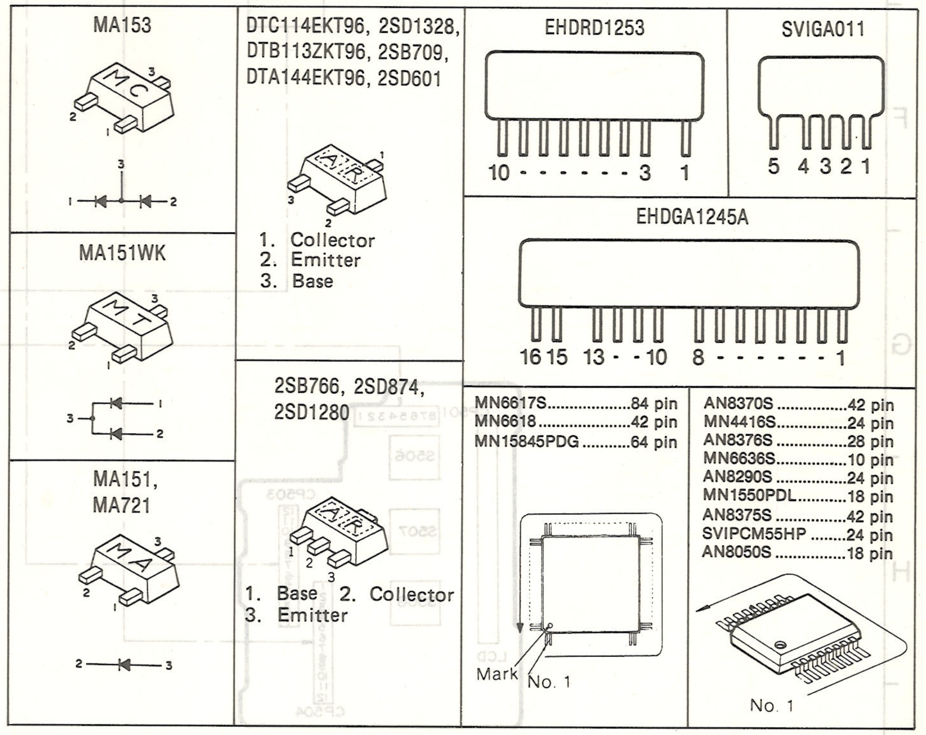
IC and LSI are sensitive to static electricity.

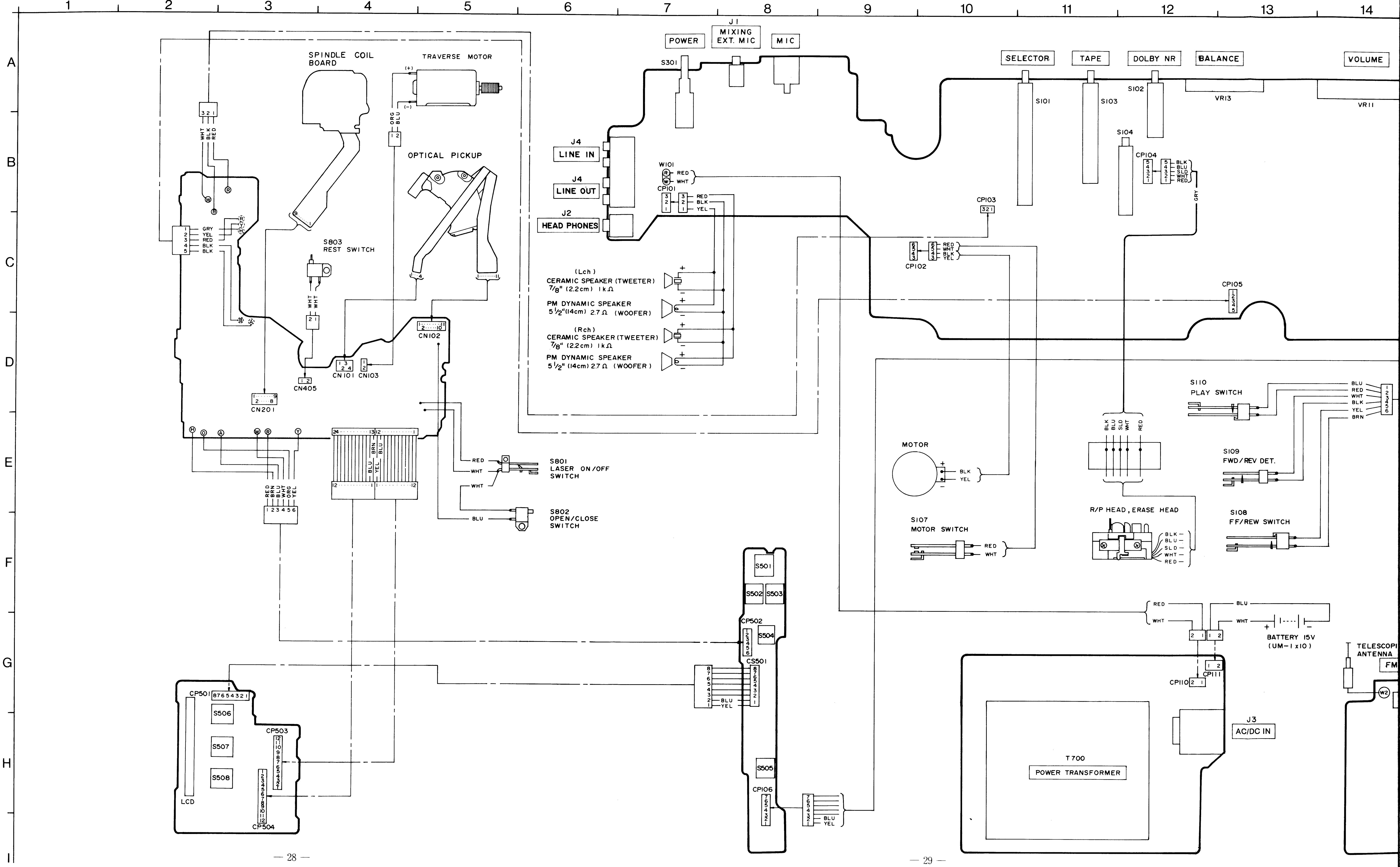
Secondary trouble can be prevented by taking care during repair.

* Cover the parts boxes made of plastics with aluminum foil.
* Ground the soldering iron.
* Put a conductive mat on the work table.
* Do not touch the legs of IC or LSI with the fingers directly.

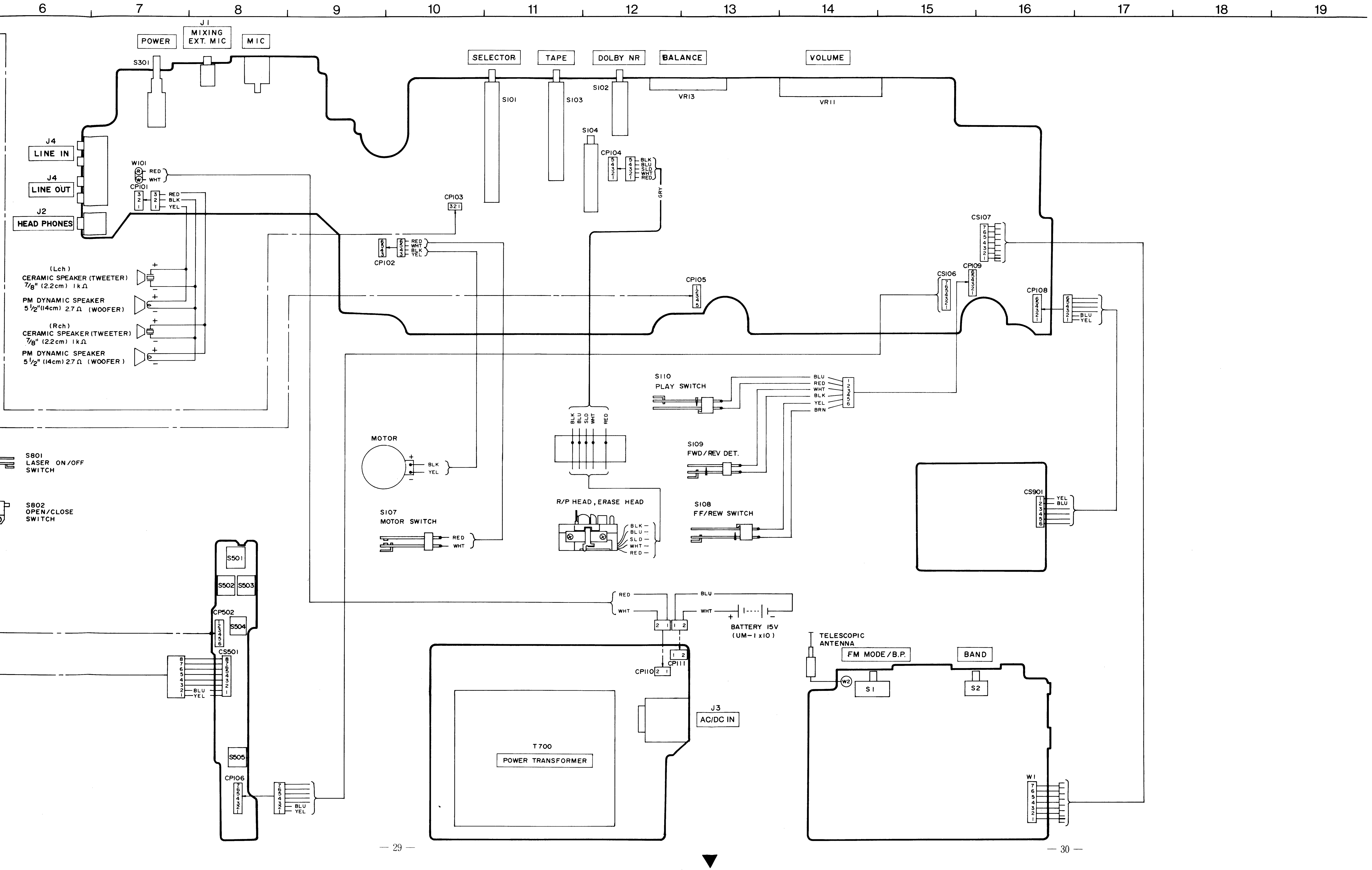
• Terminal guide of IC's, transistors and diodes


MA153
MC
1
2
3
MA151WK
MT
MA151,
MA721
MA
DTC114EKT96, 2SD1328,
DTB113ZKT96, 2SB709,
DTA144EKT96, 2SD601
AR
1. Collector
2. Emitter
3. Base
2SB766, 2SD874,
2SD1280
1. Base 2. Collector
3. Emitter
EHDRD1253
10 - - - - - - - 3 1
SVIGA011
5 4 3 2 1
EHDGA1245A
16 15 13 - - 10 8 - - - - - - - 1
MN6617S..........84 pin
MN6618..........42 pin
MN15845PDG..........64 pin
Mark
No. 1
AN8370S..........42 pin
MN4416S..........24 pin
AN8376S..........28 pin
MN6636S..........10 pin
AN8290S..........24 pin
MN1550PDL..........18 pin
AN8375S..........42 pin
SVIPCM55HP..........24 pin
AN8050S..........18 pin
No. 1

WIRING CONNECTION DIAGRAM


1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
SPINDLE COIL BOARD
TRAVERSE MOTOR
(+)
(−)
ORG
BLU
OPTICAL PICKUP
S803 REST SWITCH
WHT
BLK
RED
GRY
YEL
CN102
CN101
CN103
CN405
CN201
S801 LASER ON/OFF SWITCH
S802 OPEN/CLOSE SWITCH
BRN
POWER
J1 MIXING EXT. MIC
MIC
S301
J4 LINE IN
J4 LINE OUT
J2 HEAD PHONES
W101
CP101
(Lch) CERAMIC SPEAKER (TWEETER) 7/8" (2.2cm) 1kΩ
PM DYNAMIC SPEAKER 5 1/2" (14cm) 2.7Ω (WOOFER)
(Rch) CERAMIC SPEAKER (TWEETER) 7/8" (2.2cm) 1kΩ
PM DYNAMIC SPEAKER 5 1/2" (14cm) 2.7Ω (WOOFER)
SELECTOR
TAPE
DOLBY NR
BALANCE
VOLUME
S101
S103
S102
S104
VR13
VR11
CP104
SLD
CP103
CP102
CP105
MOTOR
S107 MOTOR SWITCH
R/P HEAD, ERASE HEAD
S110 PLAY SWITCH
S109 FWD/REV DET.
S108 FF/REW SWITCH
S501
S502
S503
CP502
S504
CS501
S505
CP106
CP501
S506
S507
S508
CP503
CP504
LCD
BATTERY 15V (UM-1 x10)
CP110
CP111
J3 AC/DC IN
T700
POWER TRANSFORMER
TELESCOPI
ANTENNA
FM
W2

WIRING CONNECTION DIAGRAM


6
7
8
9
10
11
12
13
14
15
16
17
18
19
POWER
J1
MIXING
EXT. MIC
MIC
S301
SELECTOR
TAPE
DOLBY NR
BALANCE
VOLUME
S101
S103
S102
VR13
VR11
S104
CP104
BLK
BLU
SLD
WHT
RED
GRY
J4
LINE IN
J4
LINE OUT
J2
HEAD PHONES
W101
RED
WHT
CP101
RED
BLK
YEL
CP103
CP102
RED
WHT
BLK
YEL
(Lch)
CERAMIC SPEAKER (TWEETER)
7/8" (2.2cm) 1kΩ
PM DYNAMIC SPEAKER
5 1/2" (14cm) 2.7Ω (WOOFER)
(Rch)
CERAMIC SPEAKER (TWEETER)
7/8" (2.2cm) 1kΩ
PM DYNAMIC SPEAKER
5 1/2" (14cm) 2.7Ω (WOOFER)
CP105
CS107
CS106
CP109
CP108
BLU
YEL
S110
PLAY SWITCH
BLU
RED
WHT
BLK
YEL
BRN
S109
FWD/REV DET.
S108
FF/REW SWITCH
MOTOR
BLK
YEL
S107
MOTOR SWITCH
RED
WHT
BLK
BLU
SLD
WHT
RED
R/P HEAD, ERASE HEAD
BLK
BLU
SLD
WHT
RED
CS901
YEL
BLU
S801
LASER ON/OFF
SWITCH
S802
OPEN/CLOSE
SWITCH
S501
S502
S503
CP502
S504
CS501
BLU
YEL
S505
CP106
BLU
YEL
RED
WHT
BLU
WHT
BATTERY 15V
(UM-1 x10)
CP111
CP110
J3
AC/DC IN
T700
POWER TRANSFORMER
TELESCOPIC
ANTENNA
FM MODE/B.P.
BAND
W2
S1
S2
W1

MEASUREMENTS AND ADJUSTMENTS

■ ALIGNMENT INSTRUCTION

READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT

1. Set volume control to maximum.
2. Set balance control to center.
3. Set tape selector switch to normal.
4. Set band switch to AM or FM.
5. Set function selector to radio and tape.
6. Set dolby NR switch to out.
7. Set FM mode /B.P switch to stereo.
8. Set power switch to on.
9. Set power source voltage to 15V DC.
10. Output of signal generator should be no higher than necessary to obtain an output reading.

■ AM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
	AM-IF ALIGNMENT						
(1)	AM	Fashion loop of several turns of wire and radiate signal into loop of receiver.	455kHz 30% Mod. at 400Hz	Point of non-interference. (on/about 600kHz)	Output meter across voice coil.	T2 (AM IFT)	Adjust for maximum output.
	AM-RF ALIGNMENT						
(2)	AM	〃	511kHz	Tuning capacitor fully closed.	〃	L6 (AM OSC Coil)	〃
(3)	AM	〃	1,650kHz	Tuning capacitor fully open.	〃	CT4 (AM OSC Trimmer)	〃
(4)	AM	〃	550kHz	Tune to signal.	〃	(＊1) L3 (AM ANT Coil)	Adjust for maximum output. Adjust L3 by moving coil bobbin along ferrite core.
(5)	AM	〃	1,500kHz	〃	〃	CT3 (AM ANT Trimmer)	Adjust for maximum output. Repeat steps (2)~(5).

(＊1) Cement antenna bobbin with wax after completing alignment.

■ FM ALIGNMENT

	BAND	SIGNAL GENERATOR or SWEEP GENERATOR		RADIO DIAL SETTING	INDICATOR (ELECTRONICS VOLTMETER or SCOPE)	ADJUSTMENT	REMARKS
		CONNECTIONS	FREQUENCY				
	FM-IF ALIGNMENT						
(1)	FM	High side thru. 0.001μF to test point ▼3. Negative side to test point ▼2.	10.7MHz (SWP.)	Point of non-interference. (on/about 90MHz)	Connect vert. amp. of scope to test point ▼4. Negative side to test point ▼5.	T1 (FM 1st IFT)	Adjust for maximum amplitude. (Refer to fig. 1.)
(2)	FM	〃	〃	〃	〃	T3 (FM 2nd IFT)	Adjust for maximum amplitude. (Refer to fig. 2.)
	FM-RF ALIGNMENT						
(3)	FM	Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2.	86.2MHz	Variable capacitor fully closed.	Output meter across voice coil.	L2 (FM OSC Coil)	(＊2) Adjust for maximum output.
(4)	FM		109.2MHz	Variable capacitor fully open.	〃	CT2 (FM OSC Trimmer)	〃
(5)	FM		109.2MHz	〃	〃	CT1 (FM ANT Trimmer)	(＊2) Adjust for maximum output. Repeat steps (3)~(5).

(＊2) Three output responses will be present; proper tuning is the center frequency.

■ SEPARATION ALIGNMENT

ITEM	FM SIGNAL GENERATOR SOURCE CONNECTION	EQUIPMENT CONNECTION ELECTRONIC COUNTER	ADJUSTMENT	SPECIFICATION	REMARKS
Adjustment of pilot signal.	98MHz, 60dB (CW) Connect to test point ▼1 through FM dummy antenna. Negative side to test point ▼2.	▼6...(+) ▼7...(−)	VR1	19kHz	Adjust VR1, for 19kHz ($^{+50}_{-150}$Hz) reading on electronics counter.

■ TAPE ADJUSTMENT

	ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
(1)	Azimuth	QZZCFM (8kHz, −20dB)	LINE OUT (AC voltage & Oscilloscope)	Maximum output	Azimuth screw (FWD, REV)	Playback mode FM Mode/B.P→STEREO/II (Refer to fig. 3.)
(2)	Tape speed	QZZCWAT (3kHz)	LINE OUT	3000±90Hz	Motor Volume	Playback mode (Refer to fig. 4.)
(3)	Playback gain	QZZCFM (315Hz, 0dB)	LINE OUT	0.39±0.05V	VR101 (L) VR201 (R)	Playback mode
(4)	Rec bias current	——	▼21...(+) ▼20...(−)	Tape selector Normal...9.0±0.3mV Metal/CrO$_2$...13.0±1.0mV	VR301	FM Mode/B.P→Stereo/II Tape selector→Normal Function selector→Radio (AM) (Refer to fig. 5.)
(5)	Bias oscillation frequency	——	▼21...(+) ▼20...(−)	66±2kHz	L301	〃
(6)	R/P gain	LINE IN (1kHz, −14dB)	LINE OUT	Output...0±1dB	VR102 (L) VR202 (R)	1. Apply −14dB 1kHz signal from the line input terminal. 2. Measure the output voltage of line output terminals. 3. Then, with the unit in the record mode and, record the signal. 4. Playback the recorded part, and measure the output voltage of line output terminals. 5. Compare the output voltage measured in items 3 and 6, and adjust so there is no difference in the level. (Adjust to obtain 0±1dB.)

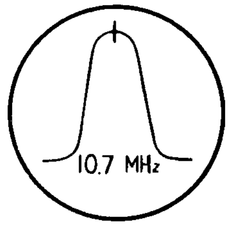


Fig. 1

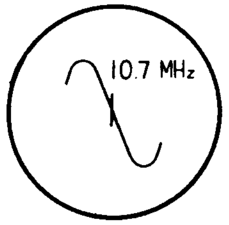


Fig. 2

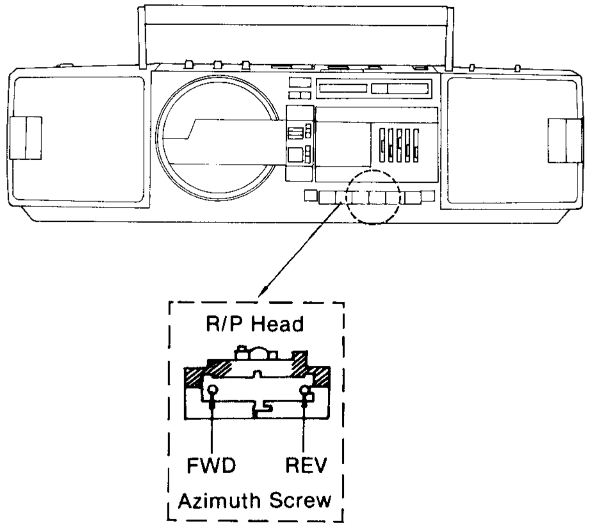
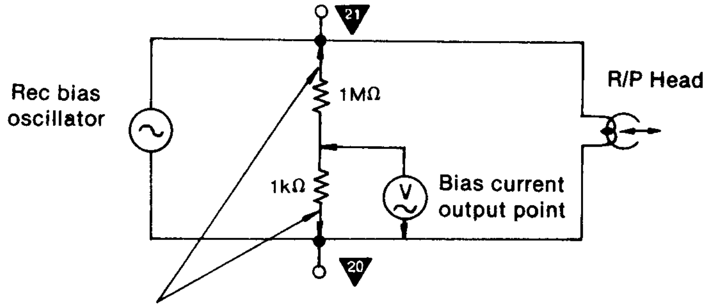


Fig. 3



Keep these cords short. (Lien capacitance: 3pF of less)

- In order not to influence the bias osillation, divide the voltage with 1MΩ and 1kΩ resistors, and measure the voltage across the 1kΩ resistor.

Fig. 5

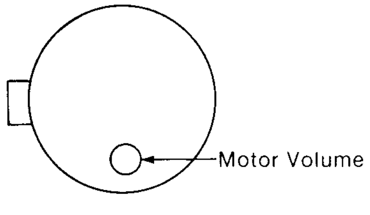


Fig. 4

■ ALIGME

＊ Please refe

s

higher than

REMARKS

st for maximum
ut.

〃

〃

st for maximum
ut. Adjust L3 by
ing coil bobbin
g ferrite core.

st for maximum
ut.
eat steps
5).

REMARKS

st for maximum
litude.
er to fig. 1.)

st for maximum
litude.
er to fig. 2.)

Adjust for maxi-
mum output.

〃

Adjust for maxi-
mum output.
Repeat steps
(3)~(5).

EMARKS

for 19kHz
ading on
counter.

■ TAPE ADJUSTMENT

	ITEM	INPUT	MEASUREMENT POINT	SPECIFICATION	ADJUSTMENT POINT	REMARKS
(1)	Azimuth	QZZCFM (8kHz, −20dB)	LINE OUT (AC voltage & Oscilloscope)	Maximum output	Azimuth screw (FWD, REV)	Playback mode FM Mode/B.P→STEREO/II (Refer to fig. 3.)
(2)	Tape speed	QZZCWAT (3kHz)	LINE OUT	3000±90Hz	Motor Volume	Playback mode (Refer to fig. 4.)
(3)	Playback gain	QZZCFM (315Hz, 0dB)	LINE OUT	0.39±0.05V	VR101 (L) VR201 (R)	Playback mode
(4)	Rec bias current	——	▼21...(+) ▼20...(−)	Tape selector Normal...9.0±0.3mV Metal/CrO$_2$...13.0±1.0mV	VR301	FM Mode/B.P→Stereo/II Tape selector→Normal Function selector→Radio (AM) (Refer to fig. 5.)
(5)	Bias oscillation frequency	——	▼21...(+) ▼20...(−)	66±2kHz	L301	〃
(6)	R/P gain	LINE IN (1kHz, −14dB)	LINE OUT	Output...0±1dB	VR102 (L) VR202 (R)	1. Apply −14dB 1kHz signal from the line input terminal. 2. Measure the output voltage of line output terminals. 3. Then, with the unit in the record mode and, record the signal. 4. Playback the recorded part, and measure the output voltage of line output terminals. 5. Compare the output voltage measured in items 3 and 6, and adjust so there is no difference in the level. (Adjust to obtain 0±1dB.)

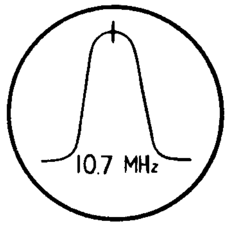


Fig. 1

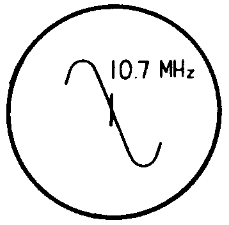


Fig. 2

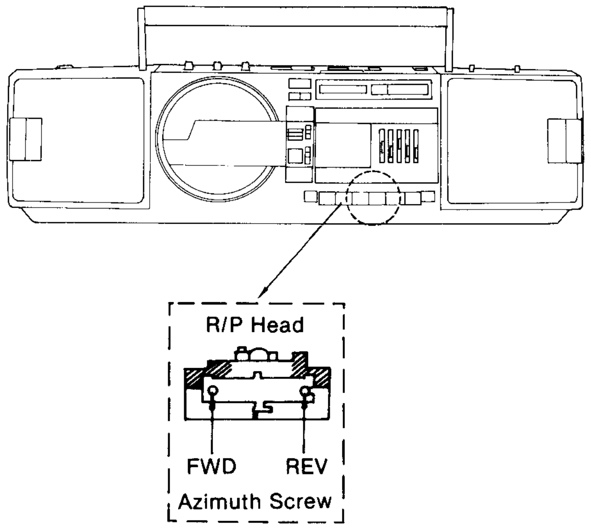
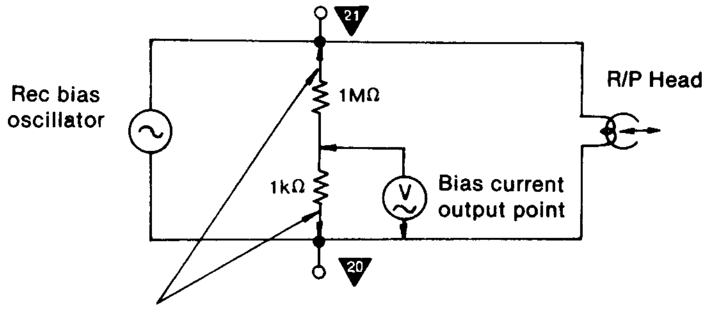

R/P Head
FWD
REV
Azimuth Screw

Fig. 3


▼21
▼20
Rec bias
oscillator
1MΩ
1kΩ
R/P Head
Bias current
output point

Keep these cords short. (Lien capacitance: 3pF of less)

- In order not to influence the bias osillation, divide the voltage with 1MΩ and 1kΩ resistors, and measure the voltage across the 1kΩ resistor.

Fig. 5

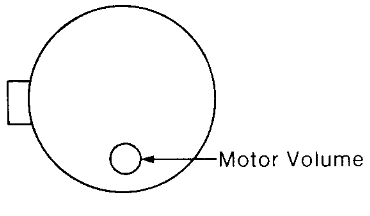

Motor Volume

Fig. 4

■ ALIGMENT POINT

∗ Please refer to Circuit Board and Wiring Connection Diagram for test point locations.

(TUNER P.C.B)

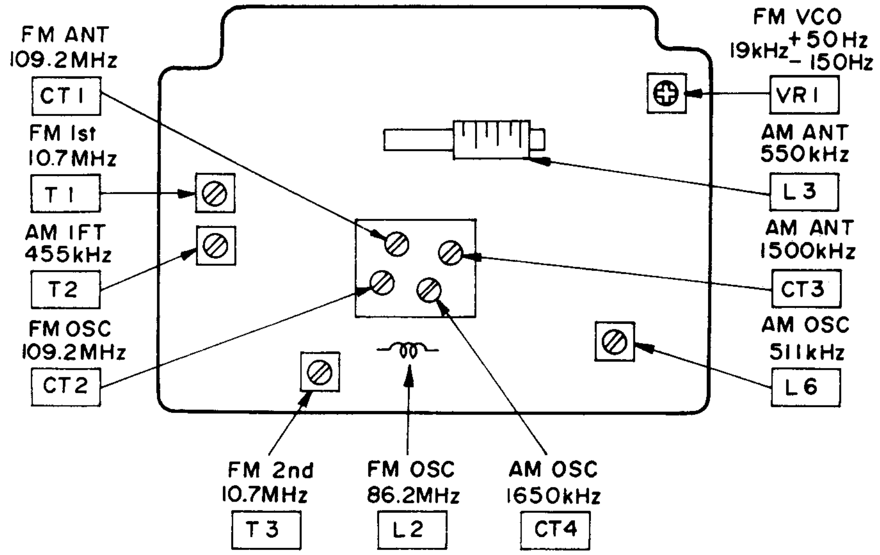

FM ANT
109.2MHz
CT1
FM 1st
10.7MHz
T1
AM IFT
455kHz
T2
FM OSC
109.2MHz
CT2
FM VCO
19kHz +50Hz −150Hz
VR1
AM ANT
550kHz
L3
AM ANT
1500kHz
CT3
AM OSC
511kHz
L6
FM 2nd
10.7MHz
T3
FM OSC
86.2MHz
L2
AM OSC
1650kHz
CT4

Fig. 6

(MAIN P.C.B)

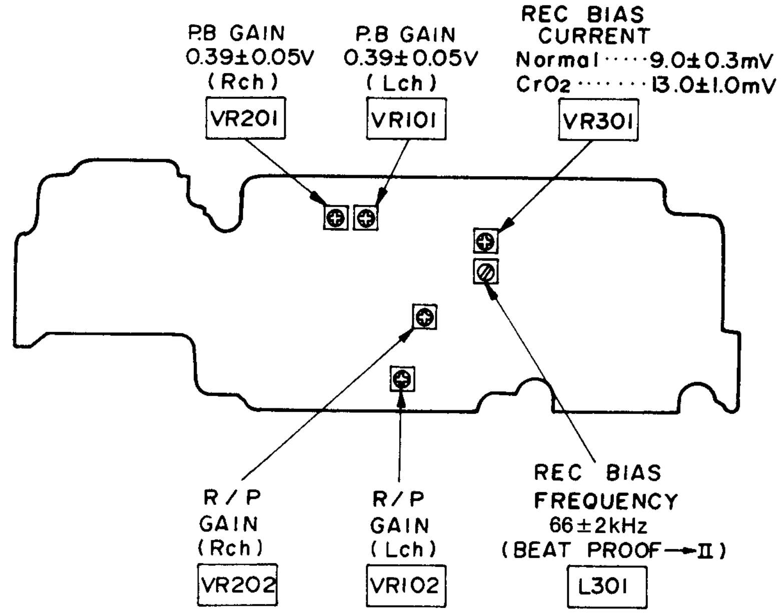

P.B GAIN
0.39±0.05V
(Rch)
VR201
P.B GAIN
0.39±0.05V
(Lch)
VR101
REC BIAS
CURRENT
Normal·····9.0±0.3mV
CrO2·······13.0±1.0mV
VR301
R/P
GAIN
(Rch)
VR202
R/P
GAIN
(Lch)
VR102
REC BIAS
FREQUENCY
66±2kHz
(BEAT PROOF→II)
L301

Fig. 7

(REAR CABINET BOTTOM VIEW)

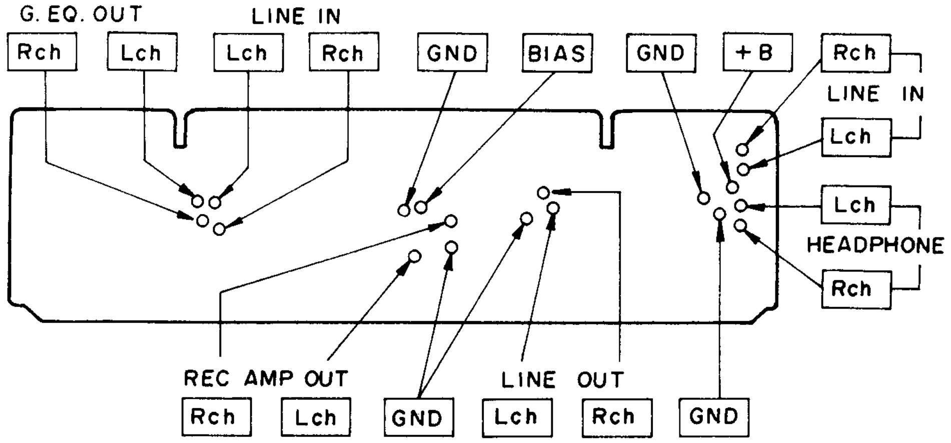

G. EQ. OUT
Rch
Lch
LINE IN
Lch
Rch
GND
BIAS
GND
+B
Rch
LINE IN
Lch
Lch
HEADPHONE
Rch
REC AMP OUT
Rch
Lch
GND
LINE OUT
Lch
Rch
GND

Fig. 8

On Adjusting the CD Player Unit

Please follow the procedure below for continuity checks, adjustment, or measurement of the CD player.

Notes:

(1) Even if during operation, the laser diode does not emit laser if the disc holder cover is not closed and safety interlock switches S801 and S802 are not on.

(2) When the disc holder cover is closed and safety interlock switches S801 and S802 are on, never look at the lens of laser pickup.

Note: To adjust the CD player section, see the adjustment procedure, order No. HAD8610743C1, for the portable CD player model SL-NP10/RX-FD80. However, the disassembly procedure is different, so when performing continuity checks, repairs, or adjustment, disassemble according to the procedure below.

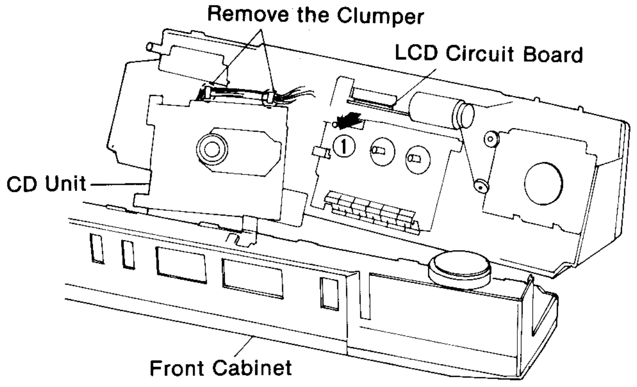

Remove the Clumper
LCD Circuit Board
CD Unit
①
Front Cabinet

Fig. 1

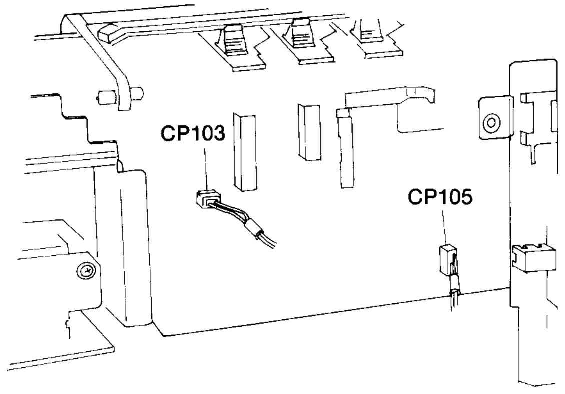

CP103
CP105

Fig. 2

1. Following the order of removal in the disassembly procedure step 1~6, remove the front cabinet. (Fig. 1)
2. Pull out the LCD circuit board in the direction of the arrow, and remove the CD unit. (Fig. 1)
3. Disconnect the CP103 (3 pin) and CP105 (5 pin) sockets. (Fig. 2)
4. Remove the two lead clamps and remove the lead wires from the holder. (Fig. 1)

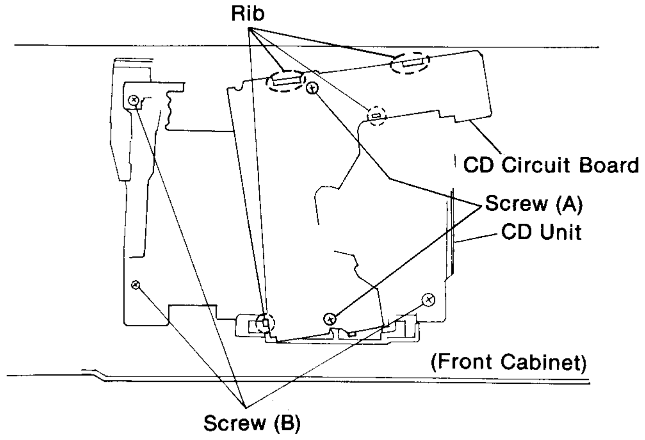

Rib
CD Circuit Board
Screw (A)
CD Unit
(Front Cabinet)
Screw (B)

Fig. 3

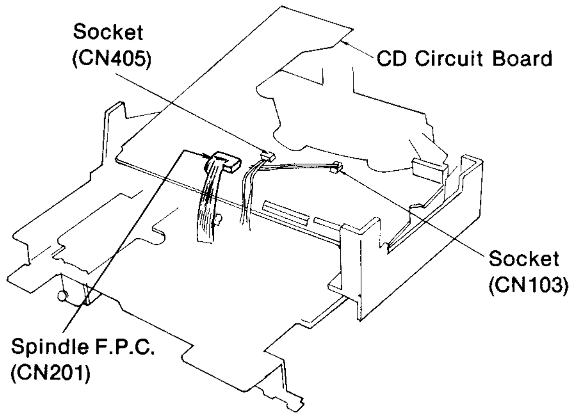

Socket
(CN405)
CD Circuit Board
Socket
(CN103)
Spindle F.P.C.
(CN201)

Fig. 4

5. Remove the two screws (A). (Fig. 3)
6. Attach the front cabinet to the CD unit, and secure it in place temporarily with three screws (B) used to attach the speakers. (Fig. 3)
7. Undo the three lugs so the CD circuit board becomes loose. (Fig. 3)
8. Remove the spindle F.P.C. (CN201) and the CN405 (2 pin) socket and connect with the F.P.C. extension cord (SZZP1075C) and the extension connector (SZZ1076C) respectively. (Fig. 4)
9. Disconnect the CN103 (2 pin) socket, pass the wires positioned under the circuit board over the top of the circuit board, and reconnect the CN103 socket. (Fig. 4)

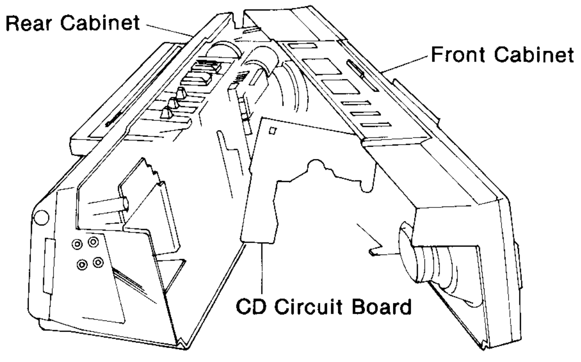

Rear Cabinet
Front Cabinet
CD Circuit Board

Fig. 5

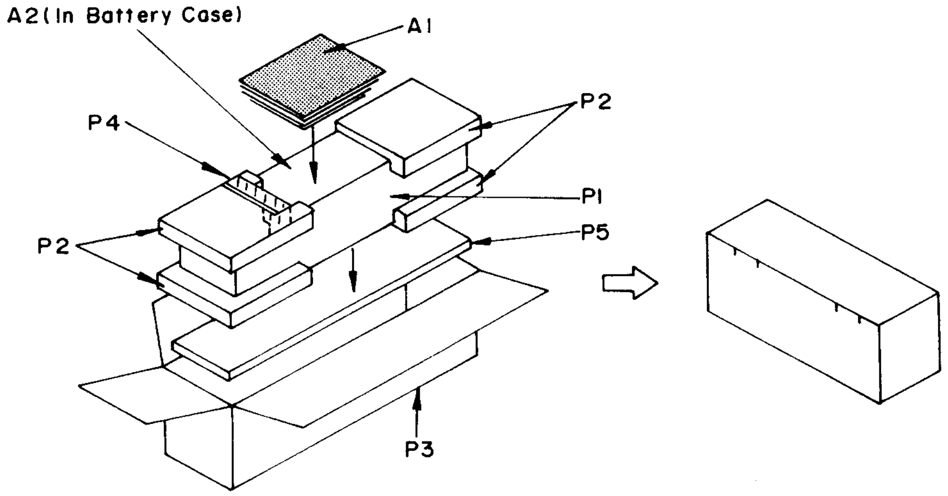
10. After connecting the CN103 socket, set the corner of the front cabinet on the corner of the rear cabinet. (Fig. 5) (This CD player is assembled at a 72° angle. If it is adjusted in any other angle or when laying flat, the laser pickup will be displaced, preventing normal operation.)

RX-FD80 IMPORTANCE PARTS

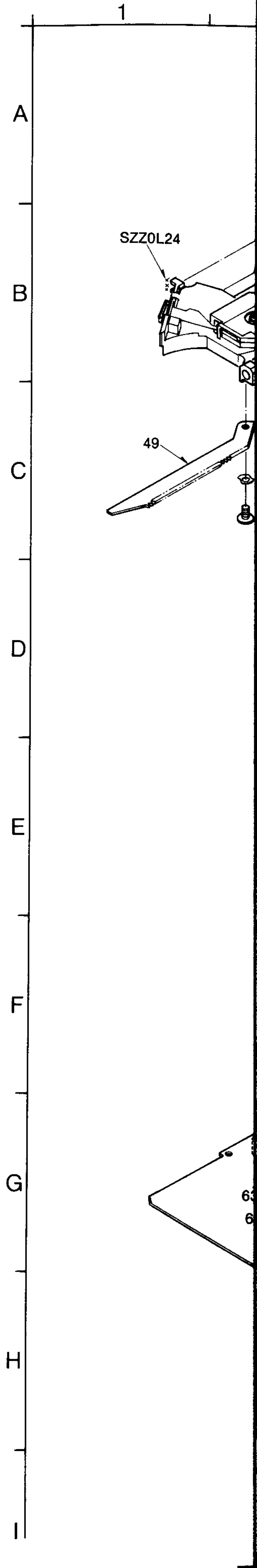
When replacing the following components, use only manufacturer's specified parts in the shaded area of cabinet parts location and below figure.

Parts Name	Remarks
C.D. Unit	
Operating Instructions	A1
Certification Label	K70-4
Front Cabinet Ass'y	K75
CD Compartment Cover	K77
Rear Cabinet Ass'y	K70

ACCESSARY AND PACKING MATERIALS


A2(In Battery Case)
A1
P4
P2
P1
P5
P2
P3

EX

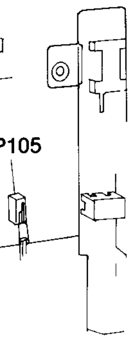

1
A
B
C
D
E
F
G
H
I
SZZ0L24
49

player.

sed and

look at

1, for
is
rding



CP105

remove the
1)

rcuit Board

Socket
(CN103)

1) and the
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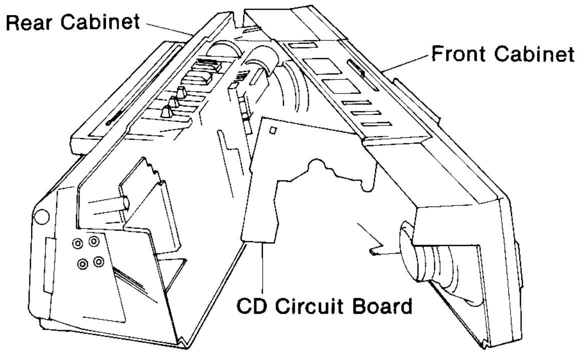
C) and the

ket, pass
rcuit board
and
. 4)


Rear Cabinet
Front Cabinet
CD Circuit Board

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(This CD player is assembled at a 72° angle. If it is adjusted in any other angle or when laying flat, the laser pickup will be displaced, preventing normal operation.)

RX-FD80 IMPORTANCE PARTS

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Certification Label	K70-4
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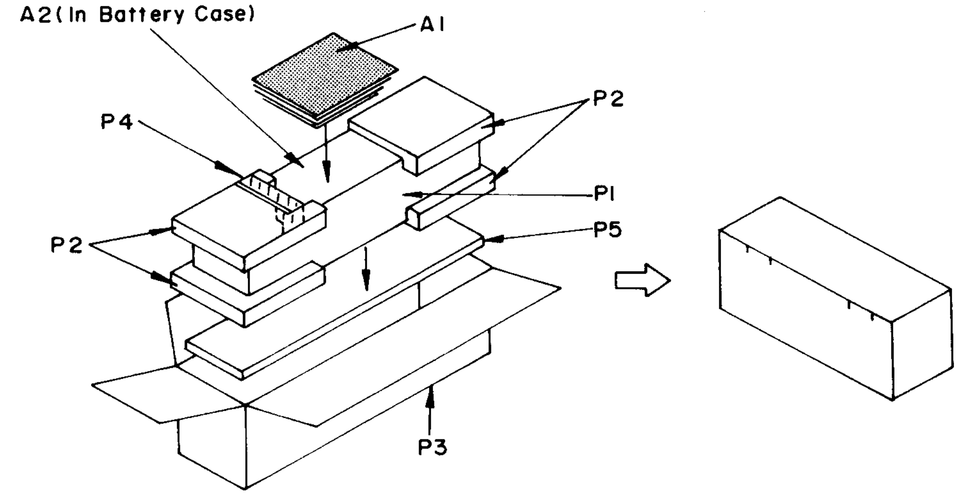
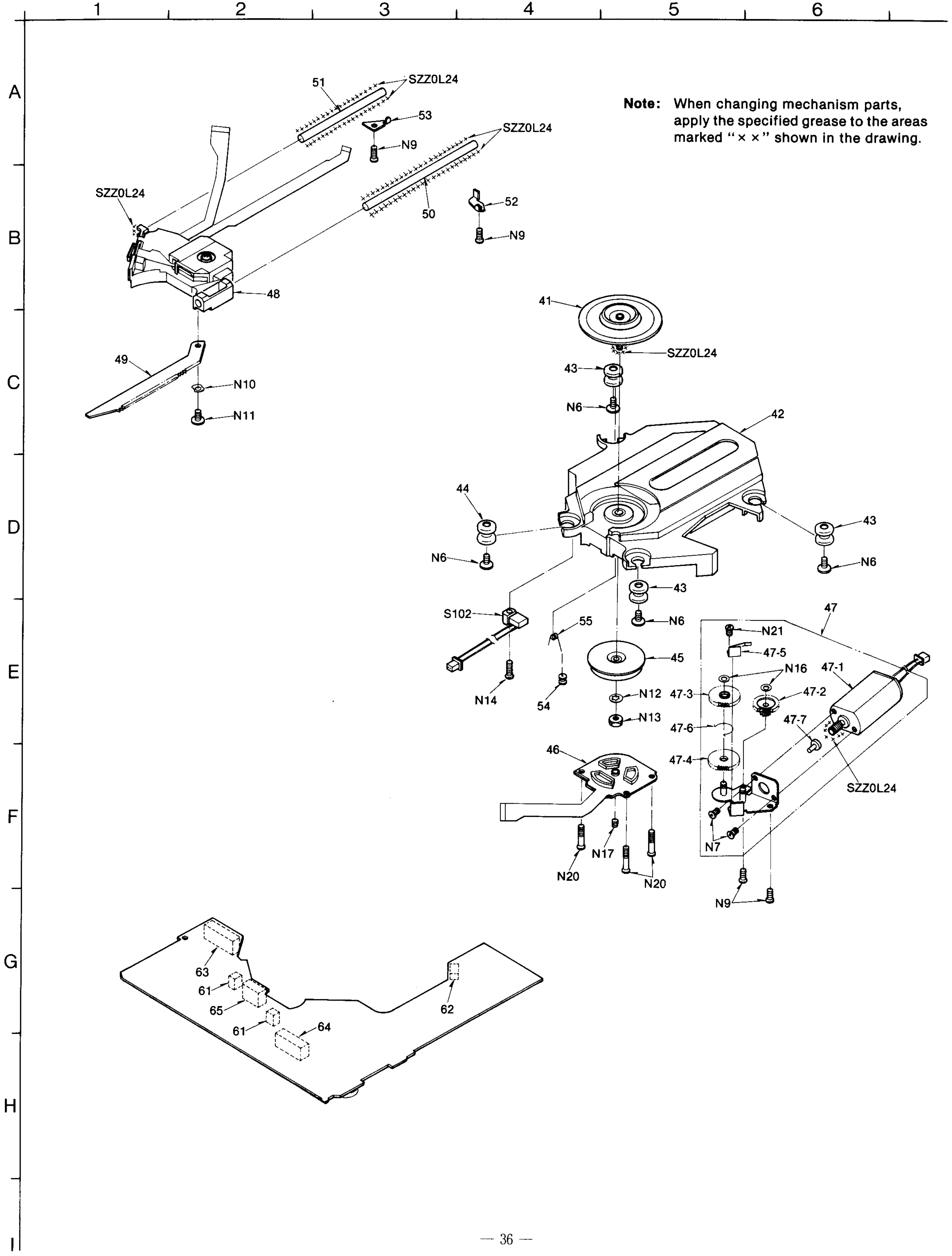
ACCESSARY AND PACKING MATERIALS


A2(In Battery Case)
A1
P4
P2
P1
P5
P2
P3

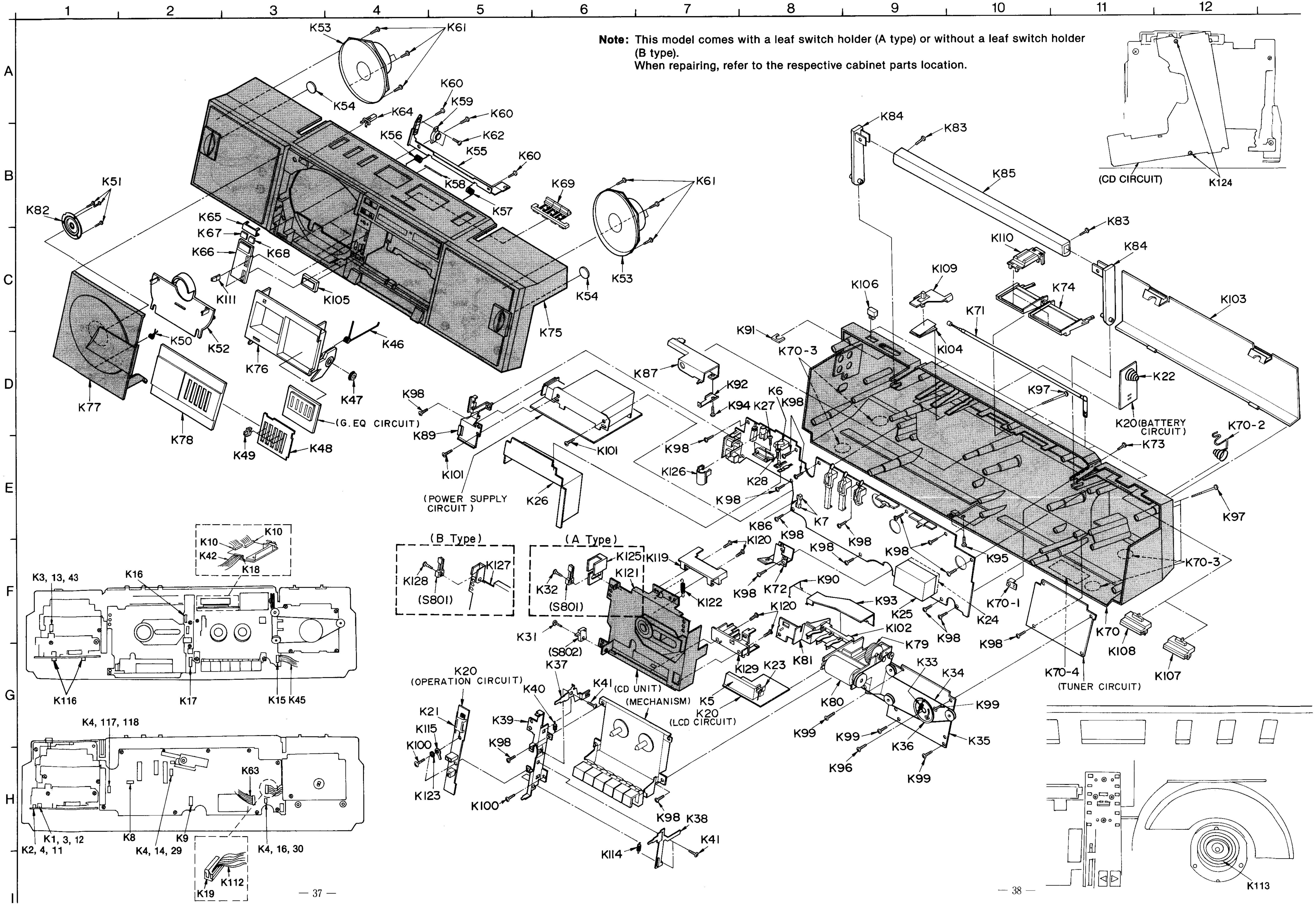
EXPLODED VIEWS (CD PLAYER SECTION)


1
2
3
4
5
6
A
B
C
D
E
F
G
H
I
51
SZZ0L24
53
N9
SZZ0L24
SZZ0L24
50
52
N9
48
49
N10
N11
41
SZZ0L24
43
N6
42
44
43
N6
N6
43
N6
47
S102
55
45
N21
47-5
N16
47-1
47-3
47-2
47-6
47-7
47-4
N14
54
N12
N13
46
SZZ0L24
N7
N17
N20
N20
N9
63
61
65
61
64
62

Note: When changing mechanism parts, apply the specified grease to the areas marked "× ×" shown in the drawing.

CABINET PARTS LOCATION

Note: This model comes with a leaf switch holder (A type) or without a leaf switch holder (B type).
When repairing, refer to the respective cabinet parts location.

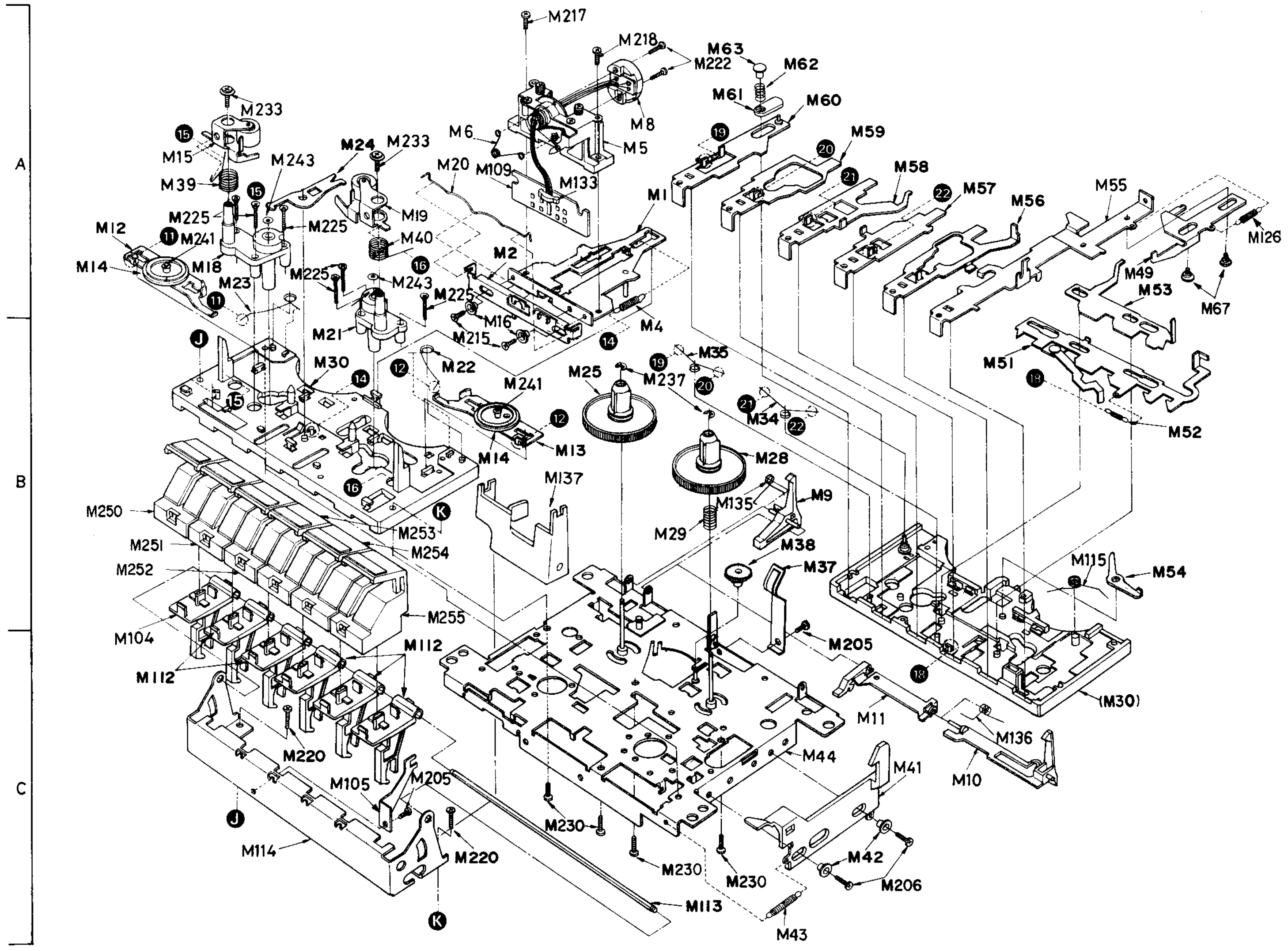


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
K53
K61
K54
K60
K59
K64
K60
K56
K62
K55
K60
K58
K57
K69
K61
K53
K54
K75
K51
K82
K65
K67
K68
K66
K111
K105
K50
K52
K76
K46
K47
K77
K78
K49
K48
(G.EQ CIRCUIT)
K98
K89
K101
K101
(POWER SUPPLY CIRCUIT)
K26
K87
K92
K94
K27
K6
K98
K98
K126
K28
K98
K91
K70-3
K106
K109
K74
K110
K83
K84
K85
K84
K83
K71
K104
K103
K22
K97
K20(BATTERY CIRCUIT)
K73
K70-2
K97
K7
K86
K98
K98
K98
K98
K95
K70-3
(CD CIRCUIT)
K124
K10
K10
K42
K18
K3, 13, 43
K16
K116
K17
K15 K45
(B Type)
K127
K128
(S801)
(A Type)
K125
K119
K32
K121
(S801)
K120
K122
K98
K72
K90
K93
K25
K24
K70-1
K98
K31
(S802)
K37
K120
K102
K79
K81
K98
K70
K108
K107
K70-4
(TUNER CIRCUIT)
K20
(OPERATION CIRCUIT)
K40
K41
(CD UNIT)
(MECHANISM)
K129
K23
K5
K20
(LCD CIRCUIT)
K33
K34
K80
K99
K99
K99
K96
K36
K35
K99
K21
K115
K100
K123
K39
K98
K100
K98
K38
K41
K114
K4, 117, 118
K63
K1, 3, 12
K2, 4, 11
K8
K4, 14, 29
K9
K4, 16, 30
K19
K112
K113

D

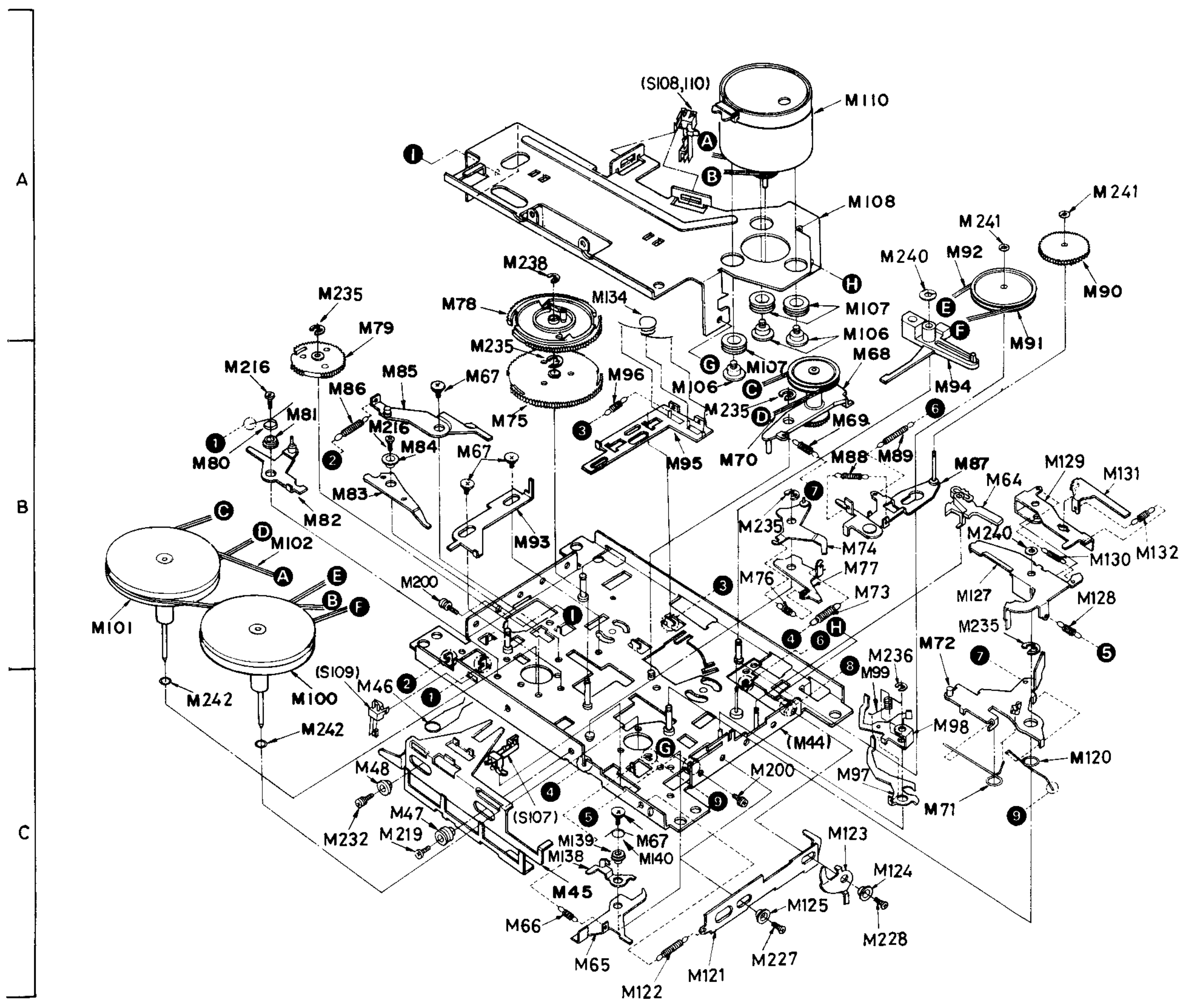
MECHANISM PARTS LOCATION

(TOP VIEWS)


A
B
C
M217
M218
M63
M222
M62
M61
M60
M59
M58
M57
M56
M55
M126
M67
M53
M49
M51
M52
M54
M115
(M30)
M8
M5
M6
M133
M109
M20
M1
M2
M4
M233
M15
M39
M243
M24
M19
M40
M225
M12
M241
M14
M18
M23
M21
M16
M215
M22
M30
M25
M237
M35
M34
M13
M137
M28
M135
M9
M29
M38
M37
M205
M11
M136
M10
M41
M44
M42
M206
M230
M113
M43
M220
M114
M105
M112
M104
M250
M251
M252
M253
M254
M255
J
K

M1 ~99	14 12 15 18 21 24 19 20 6 2 13 25 8 4 63 35 34 38 9 62 60 59 11 58 57 56 55 53 (30) 52 39 23 30 40 22 14 16 5 1 29 61 28 43 37 44 42 41 10 51 49 54 67
M100 ~250	250 252 251 225 233 220 225 233 253 255 225 109 241 217 230 218 237 230 135 230 205 136 115 126 104 112 241 114 243 105 243 254 112 205 215 220 137 133 222 113 206

(BOTTOM VIEWS)


A
B
C
(S108,110)
M110
M241
M108
M240
M92
M90
M91
M107
M106
M68
M94
M238
M134
M78
M235
M79
M216
M81
M80
M85
M86
M84
M67
M75
M96
M95
M70
M69
M88
M89
M87
M64
M129
M131
M130
M132
M82
M83
M102
M101
M93
M200
M74
M77
M76
M73
M127
M128
M236
M99
M72
M98
M71
M120
M97
(M44)
M100
M242
(S109)
M46
M48
M47
M232
M219
(S107)
M139
M138
M140
M45
M66
M65
M122
M121
M227
M228
M123
M124
M125

M30 ~99	80 81 86 46 79 85 78 67 75 93 45 96 67 95 70 (44) 69 88 73 89 72 94 92 91 90 82 83 48 47 84 67 66 65 76 99 74 77 97 68 71 98 87 64
M100 ~250	101 242 216 102 100 235 200 216 238 139 134 122 106 227 107 110 108 124 240 127 241 120 129 132 242 232 219 235 138 140 235 121 200 235 125 106 236 123 107 228 235 240 241 128 130 131

Specifications

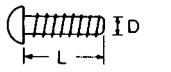
Playback torque	25~55g•cm
Fast Forward torque	80~140g•cm
Rewind torque	80~140g•cm
Wow and flutter	Less than 0.35% (WRMS)

Screw Dimensions Quick Reference

• Dimensions

XSN 3 + 10=Pan head machine screw, 3mm in diameter, 10mm long.

Type/Diameter/Length



• Types

Precision machine screw	Machine screw	Tapping/Tap-tight machine screw
XQC Flat head XQG Oval fillister head XQH Flat fillister head XQS Flat head	XSB Binding head XSC Oval countersunk head XSH Flat fillister head XSN Pan head XSS Flat head	XTB Binding head XTC Oval countersunk head XTN Pan head XTS Flat head

■ REPLACEMENT PARTS LIST

Notes:

1. The letter in the square bracket after the part name indecates the color of the part.
   [S]...Silver

Ref. No.	Part No.	Part Name & Description
		MECHANICAL PARTS
M1	**RFU104ZA**	Head Panel Ass'y
M2	**RFY736ZA**	Lever, C.H.P
M4	**RFS525Z**	Spring, Head Panel Ass'y
M5	**RFU105ZA**	Head Base Ass'y
M6	**RFS665ZA**	Spring, Turn Over
M8	**1JH0024ZA**	R/P Head Ass'y
M9	**RFY737ZA**	Lever, Erase Safety (FWD)
M10	**RFY738ZA**	Lever, Erase Safety (REV) (A)
M11	**RFY739ZA**	Lever, Erase Safety (REV) (B)
M12	**RFD203Z**	Trigger Roller Plate Ass'y (REV)
M13	**RFD204Z**	Trigger Roller Plate Ass'y (FWD)
M14	**RFK15Z**	Trigger Roller Ass'y
M15	**RFR41ZA**	Pinch Roller Arm Ass'y (REV)
M16	**RFX149ZA**	Collar, C.H.P Lever
M18	**RFD300ZA**	F.L. Metal Ass'y (REV)
M19	**RFR42ZA**	Pinch Roller Arm Ass'y (FWD)
M20	**RFS666ZA**	Spring, Pinch Roller Arm Ass'y
M21	**RFD301ZA**	F.L. Metal Ass'y (FWD)
M22	**RFS503ZA**	Spring, Trigger Roller Plate Ass'y (FWD)
M23	**RFS502Z**	Spring, Trigger Roller Plate Ass'y (REV)
M24	**RFY502Z**	Lever, Head Base Control
M25	**RFJ63ZA**	Reel Table Ass'y (REV)
M28	**RFJ64ZA**	Reel Table Ass'y (FWD)
M29	**RFS546Z**	Spring, Back Tension
M30	**RFU58Z**	Button Base
M34	**RFS547Z**	Spring (A), Button Lever
M35	**RFS667ZA**	Spring (B), Button Lever
M37	**RFS509ZA**	Spring, Cassette Pressure
M38	**RFG94ZA**	Gear, FF
M39	**RFS668ZA**	Spring, Pinch Roller Arm (REV)
M40	**RFS669ZA**	Spring, Pinch Roller Arm (FWD)
M41	**RFY740ZA**	Lever, Eject Slide
M42	**RFX120Z**	Collar, Eject Slide Lever
M43	**RFS670ZA**	Spring, Eject Slide Lever
M44	**RFU108ZA**	Mechanism Base Ass'y
M45	**RFY741ZA**	Slide Lever
M46	**RFS671ZA**	Spring, Gear
M47	**RFX150ZA**	Collar (A)
M48	**RFX151ZA**	Collar (B)
M49	**RFS742ZA**	Lever, Rec Sensor
M51	**RFY558Z**	Plate, Pressure Button Operation
M52	**RFS672ZA**	Spring, Pressure Button Operation Plate
M53	**RFY526Z**	Plate, Switch Operation
M54	**RFY559Z**	Lever, Rew
M55	**RFS671ZA**	Lever, Rec Button
M56	**RFY743ZA**	Lever, Play Button
M57	**RFY509Z**	Lever, Rew Button
M58	**RFY510Z**	Lever, FF Button
M59	**RFY511Z**	Lever, Stop Button
M60	**RFY512Z**	Lever Ass'y, Pause Button
M61	**RFY513Z**	Lever, Pause
M62	**RFS512Z**	Spring, Pause Lever
M63	**RFX122Z**	Stopper, Pause Lever
M64	**RFY744ZA**	Lever, Mode Change
M65	**RFY745ZA**	Double Sided Sensing Plate
M66	**RFS661ZA**	Spring, Double Sided Sensing Plate
M67	**RFE332ZA**	Screw (Rec Sensor Lever, etc. M'tg)
M68	**RFK21ZA**	RF Clutch Ass'y
M69	**RFS660ZA**	Spring, RF Clutch Ass'y
M70	**RFB59Z**	Belt, FF
M71	**RFS514Z**	Spring, Lift Arm Ass'y
M72	**RFY516Z**	Lift Arm Ass'y
M73	**RFS673ZA**	Spring, Main Trigger Arm Ass'y
M74	**RFY746ZA**	Main Trigger Arm Ass'y (A)
M75	**RFG96ZA**	Gear, Main
M76	**RFS674ZA**	Spring, Main Trigger Arm (B)
M77	**RFY747ZA**	Main Trigger Arm (B)
M78	**RFG97ZA**	Gear, Change
M79	**RFG98ZA**	Gear, Head Plate Moving
M80	**RFS517Z**	Spring, Trigger Arm
M81	**RFX148ZA**	Collar, Trigger Arm
M82	**RFY519Z**	Trigger Arm Ass'y
M83	**RFY520Z**	Arm, Trigger
M84	**RFX123Z**	Collar, Trigger Arm
M85	**RFY521Z**	Play Moving Arm Ass'y
M86	**RFS518Z**	Spring Play Moving Arm Ass'y
M87	**RFG79Z**	Cam Gear Plate Ass'y
M88	**RFS553Z**	Spring, Detector Plate
M89	**RFS520Z**	Spring, Cam Gear Plate
M90	**RFG78Z**	Gear, Cam
M91	**RFQ50ZA**	Pully
M92	**RFB76ZA**	Belt (A), Main
M93	**RFY522Z**	Lever, RF
M94	**RFE211Z**	Plate, Detector
M95	**RFY745ZA**	Lever, Control
M96	**RFS554Z**	Spring, Control Lever
M97	**RFY746ZA**	Lever, Stop
M98	**RFY729ZA**	Double Sided Function Lever
M99	**RFS662ZA**	Spring, Function Lever
M100	**RFF47ZA**	Flywheel Ass'y, Pulley Capstan
M101	**RFF48ZA**	Flywheel Ass'y, Gear Capstan
M102	**RFB52Z**	Belt (B), Main
M104	**RFY524Z**	Lever, Operation
M105	**RFD297ZA**	Shaft, Stopper
M106	**RFE213Z**	Screw (Motor Ass'y M'tg)
M107	**RFI32Z**	Cushion, Motor Ass'y
M108	**RFD302ZA**	Bracket, Motor
M109	**RFT18ZA**	Relay Base Plate
M110	**RFM104ZA**	Motor Ass'y
M112	**RFY747ZA**	Lever, Operation
M113	**RFY525Z**	Shaft, Button Lever
M114	**RFD206Z**	Frame, Button
M115	**RFS675ZA**	Spring, Rec Button Lever
M120	**RFS676ZA**	Spring, Lift Arm Ass'y
M121	**RFY748ZA**	Rec Change Lever
M122	**RFS677ZA**	Spring, Rec Change Lever, Eject Slide Lever
M123	**RFY749ZA**	Lever, M Kick
M124	**RFX152ZA**	Collar, M Kick Lever
M125	**RFX117Z**	Collar, Rec Change Lever
M126	**RFS678ZA**	Spring, Rec Button Lever
M127	**RFY750ZA**	Lever (H), Change
M128	**RFS679ZA**	Spring, Change Lever (H)
M129	**RFY751ZA**	Lever (J), Change
M130	**RFS680ZA**	Spring, Change Lever (J)
M131	**RFY752ZA**	Lever (K), Change
M132	**RFS681ZA**	Spring, Change Lever (K)
M133	**RFE336ZA**	Cord Clamper
M134	**RFS657ZA**	Spring, Change Lever
M135	**RFS682ZA**	Spring, Erase Safety Lever (FWD)
M136	**RFS683ZA**	Spring, Erase Safety Lever (REV)
M137	**RFD303ZA**	Angle, Button Shaft
M138	**RFY755ZA**	Lever, Switch
M139	**RFX153ZA**	Collar, Switch Lever
M140	**RFS685ZA**	Spring, Switch Lever
M200	**RFE229ZA**	Screw ⊕2×3 (Rec Change Lever, etc. M'tg)
M205	**XTN2+3B**	Screw ⊕2×3 (Cassette Holder Spring, etc. M'tg)
M206	**RFE221Z**	Screw ⊕2×5 (Eject Slide Lever M'tg)
M215	**RFE337ZA**	Screw ⊕1.7×3 (C.H.P Lever M'tg)
M216	**XQN2+35**	Screw ⊕2×3.5 (Trigger Arm M'tg)
M217	**RFE338ZA**	Screw ⊕2×4.5 (Head Base Ass'y M'tg)
M218	**RFE339ZA**	Screw ⊕2×4.5 (Head Base Ass'y M'tg)
M219	**RFE98ZA**	Screw ⊕2×6 (Slide Lever M'tg)
M220	**XQN2+7**	Screw ⊕2×8 (Button Flame M'tg)
M222	**RFE340ZA**	Screw ⊕1.6×5.2 (Head Ass'y M'tg)
M225	**RFE344ZA**	Screw ⊕2×8.5 (F.L. Metal Ass'y M'tg)
M227	**RFE345ZA**	Screw ⊕2×3.5 (Rec Change Lever M'tg)
M228	**RFE346ZA**	Screw ⊕2.3×5 (Rec Change Lever M'tg)
M230	**RFE222ZA**	Screw ⊕2×6 (Button Base M'tg)
M232	**RFE346ZA**	Screw ⊕2×6 (Slide Lever M'tg)
M233	**RFE327ZA**	Screw ⊕2×6 (Pinch Roller Arm Ass'y M'tg)
M235	**XUC2FT**	E. Ring (Head Plate Moving Gear, etc. M'tg)
M236	**XUC15FT**	E. Ring (Double Sided Function Lever M'tg)
M237	**RFE133Z**	E. Ring (Reel Table Ass'y M'tg)
M238	**RFE330ZA**	E. Ring (Change Gear M'tg)
M240	**RFE341ZA**	Washer φ2.1, Detector Plate, etc. M'tg
M241	**RFE216Z**	Washer φ1.2, Cam Gear etc. M'tg
M242	**RFE342ZA**	Washer φ2, Flywheel Ass'y
M243	**RFE343ZA**	Washer φ1.55, Flywheel M'tg
M250	**RBC1100ZA**	Button, Record Ⓢ
M251	**RBC1101ZA**	Button, Playback Ⓢ
M252	**RBC1102ZA**	Button, Rewind Ⓢ
M253	**RBC1103ZA**	Button, FF Ⓢ
M254	**RBC1104ZA**	Button, Stop/Eject Ⓢ
M255	**RBC1105ZA**	Button, Pause Ⓢ

■ REPLACEMENT PARTS LIST

Notes:

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2. The letter in the equare bracket after the part name indicates the color of the part.
   [K]...Black, [W]...White, [S]...Silver.

Ref. No.	Part No.	Part Name & Description
		CABINET PARTS
K 1	**RJS2L4Z**	Socket (2 Pin, CS110)
K 2	**RJS2L3Z**	Socket (2 Pin, CS111)
K 3	**RJT707Z**	Terminal, Socket
K 4	**RJT807Z**	Terminal, Socket
K 5	**EDD062C73A3P**	LCD
K 6	**RJM164Z**	Built-in Microphone
K 7	**QTF1054**	Fuse Holder ⚠
K 8	**EMCS0350Z**	Plug (3 Pin, CP103)
K 9	**EMCS0550Z**	Plug (5 Pin, CP105)
K 10	**EMCS1250Z**	Plug (12 Pin, CP503, 504)
K 11	**RJP2G18Z**	Plug (2 Pin, CP111)
K 12	**RJP2G4Y**	Plug (2 Pin, CP110)
K 13	**RJP3G4Y**	Plug (3 Pin, CP101)
K 14	**RJP5G18Z**	Plug (5 Pin, CP104)
K 15	**RJP6G18ZA**	Plug (6 Pin, CP108)
K 16	**RJP6G20Z**	Plug (6 Pin, CP109, 502)
K 17	**RJP7G18ZA**	Plug (7 Pin, CP106)
K 18	**RJP8G18Z**	Plug (8 Pin, CP501)
K 19	**RJS7T5ZA**	Socket (7 Pin, CS107)
K 20	**RUP2241ZAN**	Circuit Board, Operation/Battery/LCD/Power Source
K 21	**RUS715ZA**	Spring, Operation
K 22	**RJC511Z**	Terminal, Battery (−)
K 23	**RME439ZA**	LCD Holder
K 24	**RMC1117ZA**	Shield Plate
K 25	**RMC1118ZA**	Shield Plate
K 26	**RMY233ZA**	Heat Sink (for IC304)
K 27	**XTW3+6F**	Screw ⊕3×6 (Heat Sink M'tg)
K 28	**XTW3+8F**	Screw ⊕3×8 (Heat Sink M'tg)
K 29	**RJS5L4Z**	Socket (5 Pin, CS104)
K 30	**RJS6L4Z**	Socket (6 Pin, CS109)
K 31	**XTV2+6F**	Screw ⊕2×6 (Micro Switch M'tg)
K 32	**XTV26+8F**	Screw ⊕2.6×8 (Leaf Switch M'tg)
K 33	**RDS4090A**	Spring, Dial Drum
K 34	**RDZ05Z**	Cord, Dial Drum
K 35	**RMC1119ZA**	Shield Plate
K 36	**RDD392ZB**	Drum, Dial
K 37	**RUB477ZB**	Lever, Mode
K 38	**RUB478ZA**	Lever, Direction
K 39	**RUL930ZA**	Chassis, Direction
K 40	**QBT2047**	Spring, Direction Lever
K 41	**RHE5133ZA**	Screw (Mode Lever, etc. M'tg)
K 42	**1JSAFD80ZA-4**	Flat Cable
K 43	**RJS3L3Z**	Socket (3 Pin, CS101)
K 45	**2JSAFD80ZA**	Lead Wire Ass'y
K 46	**RUW112ZA**	Spring, Cassette Compartment Ass'y
K 47	**RDG5709Y**	Gear, Cassette Compartment Ass'y
K 48	**RKE553Z**	Cover, EQ [K]
K 49	**RBD405YA-1**	Knob, EQ [S]
K 50	**RUW111ZA**	Spring, Disc Holder Ass'y
K 51	**XQN2+AJ4FN**	Screw ⊕2×4 (Magnet Ass'y M'tg)
K 52	**RKE593ZA-0**	Holder CD [K]
K 53	**EAS14P61A**	Speaker, Woofer
K 54	**RAF04E4A01**	Speaker, Tweeter
K 55	**RUL932ZA**	Angle, Disc Holder Ass'y
K 56	**RUS717ZA**	Spring, Disc Holder Ass'y
K 57	**RUS718ZA**	Spring, Disc Holder Ass'y
K 58	**RDF3106ZB**	Shaft, Disc Holder Ass'y
K 59	**RDG5024Z**	Gear, Disc Holder Ass'y
K 60	**XTV3+10G**	Screw (Disc Holder Ass'y Angle, etc. M'tg)
K 61	**XTW3+10F**	Screw (Speaker M'tg)
K 62	**XQN2+A4**	Screw (Disc Holder Ass'y Gear M'tg)
K 63	**1JSAFD80ZA-3**	Lead Wire Ass'y
K 64	**RHR3135ZA**	Lock Switch [K]
K 65	**RBC1106ZA-0**	Button, CD Play [S]
K 66	**RBC1107ZA-0**	Button, CD Stop [S]
K 67	**RBC1108ZA-0**	Button, CD Skip (REV) [S]
K 68	**RBC1109ZA-0**	Button, CD Skip (FWD) [S]
K 69	**RBC1111ZA-0**	Button, CD Memory [S]
K 70	**RYFXFD80MH**	Rear Cabinet Ass'y [K]
K 70-1	**RJT779YA**	Terminal, Antenna
K 70-2	**RJC936Z**	Spring, Battery (+)
K 70-3	**RHG349ZA**	Rubber, Cabinet [K]
K 70-4	**RQT6032YA**	Label
K 71	**XEARR225DAY**	Telescopic Antenna
K 72	**RMD1144ZC**	Bracket, Cabinet M'tg
K 73	**XYN3+C15FZ**	Screw ⊕3×15 (Telescopic Antenna M'tg)
K 74	**RYEXFD80J**	Volume Slider Ass'y
K 75	**RYMXFD80MH**	Front Cabinet Ass'y [K]
K 76	**RYQ1XFD80J**	Cassette Compartment Ass'y [K]
K 77	**RYQ2XFD80J**	Disc Holder Ass'y [K]
K 78	**RYPXFD80MH**	Cassette Panel Ass'y
K 79	**RYTXFD80J**	Tuning Knob Ass'y [S]
K 80	**RYDXFD80MH**	Dial Scal Ass'y
K 81	**RZAXFD80J**	Dial Shassis Ass'y
K 82	**RZEXFD80J**	Magnet Ass'y
K 83	**XTC3+10CFZ**	Screw ⊕3×10 (Handle M'tg)
K 84	**RKX376ZA-0**	Arm, Handle
K 85	**RKX377ZA-0**	Handle [K]
K 86	**XBA1C12NU100**	Fuse ⚠
K 87	**RUB9025ZA**	Lever, R/P
K 89	**RUL931ZB**	Angle, Jack Pressure
K 90	**RUW117ZA**	Spring, Shield Plate
K 91	**RME442ZA-0**	Holder, Jack [K]
K 92	**RMX340ZA**	Angle, Mechanism
K 93	**RMC1128ZA**	Shield Plate
K 94	**XSN3+4**	Screw ⊕3×4 (Mechanism Angle)
K 95	**XSN3+8FZ**	Screw ⊕3×8 (Rear Cabinet M'tg)
K 96	**XYN26+C5**	Screw ⊕2.6×5 (Dial Drum M'tg)
K 97	**XTN3+40G**	Screw ⊕3×40 (Rear Cabinet M'tg)
K 98	**XTV3+12G**	Screw ⊕3×12 (P.C.B, Direction Angle, Jack Pressure Angel, etc. M'tg)
K 99	**XTV3+16G**	Screw ⊕3×16 (Dial Chassis M'tg)
K 100	**XTV3+6F**	Screw ⊕3×6 (Operation Circuit Board M'tg)
K 101	**XTW3+12Q**	Screw ⊕3×12 (Power Transformer, Jack Pressure Angle M'tg)
K 102	**RHR1346ZA**	Lever, CD Control
K 103	**RKK326ZA-0**	Battery Compartment [K]
K 104	**RKE592ZA-0**	Holder, Switch Knob [K]
K 105	**RBC1110ZA-0**	Button, Synchro [S]
K 106	**RBC709YA-0**	Button, Power [K]
K 107	**RBD470YA**	Knob, Mode [K]
K 108	**RBD470ZA-0**	Knob, Band Mode [K]
K 109	**RBD471ZA-0**	Knob, Tape [S]
K 110	**RBD472ZA-0**	Knob, Volume [S]
K 111	**RBS232ZA-0**	Knob, Direction [K]
K 112	**1WBAFD80ZA**	Flat Cable
K 113	**RHS972ZA**	Sheet, Magnet
K 114	**RDS2058Z**	Spring, Direction Lever
K 115	**RJT202B**	Terminal, Earth
K 116	**RHG1125Y**	Rubber, Cushion
K 117	**RJP4G18ZA**	Plug (4 Pin, CP102)
K 118	**RJS4L4Z**	Socket (4 Pin, CS102)
K 119	**RME447ZA**	Holder, CD Circuit [W]
K 120	**XTV3+6F**	Screw ⊕3×6 (CD Circuit Holder M'tg)
K 121	**RUA773ZA**	Shassis, CD
K 122	**SUSD62**	Spring, Traverse Base
K 123	**XWA3B**	Washer, Earth Terminal
K 124	**XTN14+C6JFZ**	Screw ⊕1.4×6 (CD Circuit Board M'tg)
K 125	**RUV784ZAR**	Cover, Leaf Switch
K 126	**RUV783ZAR**	Cover, Jack
K 127	**RUA773ZB**	Chassis, CD
K 128	**XTV26+6F**	Screw ⊕2.6×6 (Leaf Switch M'tg)
K 129	**RME441ZA**	Holder, CD Circuit [K]
		ACCESSORIES
A 1	**RQX4932ZA**	Operating Instructions
A 2	**RJA22X**	Power Cord, AC ⚠
		PACKINGS
P 1	**RPH565ZA**	Polyethylen Cover
P 2	**RPN9546ZA**	Pad
P 3	**RPK2445ZA**	Gift Box
P 4	**RPN5239ZA**	Pad
P 5	**RPN5254ZA**	Pad
		CONNECTORS
61	**EMCS0252B**	Connector (CN103, CN405)
62	**EMCS0352B**	Connector (CN702)
63	**SJSD1108**	Connector (CN102)
64	**SJSD0908**	Connector (CN801)
65	**SJSD0408**	Connector (CN101)
		TRAVERS DECK
41	**SIRD24E**	Turntable Ass'y
42	**SIRD21E**	Traverse Base
43	**SHGD50**	Rubber
44	**SHGD51**	Rubber
45	**S0MD10E-1**	Rotor Ass'y
46	**SXPD580**	Spindle P.C.B. Ass'y
47	**SDGD22E-1**	Gear Ass'y
47-1	**SDGD21E**	Motor Ass'y
47-2	**SDGD22**	Gear
47-3	**SDGD24**	Gear
47-4	**SDGD23**	Gear
47-5	**SUWD30-1**	Spring
47-6	**SUSD41**	Spring
47-7	**SHRD63**	Spacer
48	**S0AD40A**	Optical Pick Up
49	**SDGD25**	Gear
50	**SUXD26**	Shaft
51	**SUXD27**	Shaft
52	**SUWD27**	Bracket
53	**SUWD28**	Bracket
54	**SHRD24**	Roller
55	**SUSD35-1**	Spring
		SCREWS, WASHERS AND NUTS
N6	**SNSD16**	Screw
N7	**XQN2+A2**	Screw
N9	**XTS2+A6JFZ**	Screw
N10	**SNWD1**	Washer
N11	**SNSD4**	Screw
N12	**XWC2AV**	Washer
N13	**XNF2BBN**	Nut
N14	**XTN2+E8JFN**	Screw
N16	**SHWD1**	Washer
N17	**SNSD20**	Screw
N20	**XTS2+A13JW**	Screw
N21	**XQN2+A15FN**	Screw

■ REPLACEMENT PARTS LIST

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(MAIN SECTION)

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description
IC 1	**RViTA7358P**	IC (FM FRONT END)
IC 2	**BA4236L**	IC (FM/AM IF AMP DET, AM OSC MIX)
IC 3	**RViBA1332L**	IC (FM MPX)
IC 301	**RViBA328**	IC (PRE/EQ AMP)
IC 302	**RViLM1131C**	IC (DOLBY NR AMP)
IC 304	**AN7147N**	IC (POWER AMP)
IC 305	**BA6122A**	IC (DD CONV)
IC 306	**RViBA6433**	IC (AMBIENCE AMP)
IC 901	**AN7332S**	IC (G.EQ AMP)

TRANSISTORS

Ref. No.	Part No.	Part Name & Description
Q 1	**2SC3313BTA**	Transistor (FM IF AMP)
Q 101, 103, 201, 203, 301, 318	**2SC3311RTA**	Transistor (AGC, REC AMP, SWITCHING)
Q 102, 202, 308, 310	**2SC1740SLNS**	Transistor (AF AMP, MIC AMP, MIX AMP)
Q 104, 105, 204, 205, 309	**2SD1468SR**	Transistor (MUTING, SWITCHING)
Q 302, 314, 321	**RVTDTC114TS**	Transistor (SWITCHING)
Q 303, 307, 316, 325, 331	**2SC3311RTA**	Transistor (SWITCHING)
Q 305	**2SD1449STA**	Transistor (SWITCHING)
Q 306	**2SC2001K1**	Transistor (BIAS OSC)
Q 311, 326	**2SD1302**	Transistor (REGULATOR, MOTOR DRIVE)
Q 312	**2SC1846R**	Transistor (REGULATOR)
Q 313	**RVTDTA114YST**	Transistor (SWITCHING)
Q 315	**RVTDTC114YST**	Transistor (SWITCHING)
Q 317	**RVTDTA143XS**	Transistor (SWITCHING)
Q 320	**2SD1480R**	Transistor (SWITCHING)
Q 322	**UN4210TA**	Transistor (SWITCHING)
Q 327	**2SB948AP**	Transistor (SWITCHING)
Q 328	**2SA719RTA**	Transistor (SWITCHING)
Q 330	**2SD965QTA**	Transistor (RECT)
Q 332	**UN4110TA**	Transistor (SWITCHING)

DIODES & RECTIFIERS

Ref. No.	Part No.	Part Name & Description
D 1, 2, 3, 4	**MA165**	Diode (D. AGC, SWITCHING)
D 101, 201, 301, 302, 306, 307, 312, 313, 315, 317, 501	**RVD1SS133**	Diode (SWITCHING)
D 102	**MA175WA**	Diode (SWITCHING)
D 103	**MA175WK**	Diode (SWITCHING)
D 303	**MA4068MTA**	Diode (REGULATOR)
D 305	**MA4100LTA**	Diode (REGULATOR)
D 502, 503	**LN022380P**	LED (FWD/REV IND)
D 504	**LN249RPHCF**	LED (FM STEREO IND)
D 700, 701, 702, 703	**RVD10E1LF**	Diode (RECT)

COILS

Ref. No.	Part No.	Part Name & Description
L 2	**RLD4Y53**	Coil, FM OSC
L 3	**RLF2C62**	Coil, AM ANT
L 6	**RL02B105**	Coil, AM OSC
L 101, 201	**RLE5031**	Filter
L 102, 202	**RLQZB822K**	Coil, Choke
L 301	**RL08R4-K**	Coil, REC BIAS
L 302	**RLQZB470K**	Coil, Choke
L 303	**RLQZD101K**	Coil, Choke
L 305, 307	**RLQW500K**	Coil, Choke
L 306	**RLQV201K**	Coil, Choke

TRANSFORMERS

Ref. No.	Part No.	Part Name & Description
T 1, 3	**RLi4B153**	IFT, FM 1st, 2nd
T 2	**RLi2B458**	IFT, AM
T 700	**RLT5Z5C2A-X**	Power Transformer ⚠

VARIABLE CAPACITORS

Ref. No.	Part No.	Part Name & Description
VC 1, 2, 3, 4 (CT 1, 3, 5, 6)	**RCV4LC2V3K-S**	Variable Capacitor/with Trimmer Capacitor

VARIABLE RESISTORS

Ref. No.	Part No.	Part Name & Description
VR 1	**EVND4AA00B14**	FM VCO Adjustment VR 10kΩ (B)
VR 11	**EWATF2C95B54**	Volume Control VR 50kΩ (B)
VR 13	**EWASJ2C95G54**	Balance Control VR 50kΩ (G)
VR 101, 201, 301	**EVND4AA00B14**	Playback Level, Rec Bias Adjustment VR 10kΩ (B)
VR 102, 202	**EVND4AA00B25**	Record/Playback Gain Adjustment VR 200kΩ (B)
VR 901	**EVBJT2PA1201**	G. EQ Control VR

CERAMIC FILTERS

Ref. No.	Part No.	Part Name & Description
CF 1	**RVF107WDZ**	Ceramic Filter (10.7MHz)
CF 2	**RVFSFU455B**	Ceramic Filter (455kHz)

THERMISTOR

Ref. No.	Part No.	Part Name & Description
TH 301	**RRT202**	Thermistor

FILTER

Ref. No.	Part No.	Part Name & Description
Z 1	**RXABPMB6AT**	Component Combination

SWITCHES

Ref. No.	Part No.	Part Name & Description
S 1	**RSS3A15Z**	Slide Switch, Mode/B.P
S 2	**RSS2B57Z**	Slide Switch, Band
S 101	**RST4F10ZA-H**	Slide Switch, Function
S 102	**RST2B48ZA-H**	Slide Switch, Dolby
S 103	**RST2F16ZA-H**	Slide SWitch, Tape Selector
S 104	**RSH2J04TA-A**	Slide Switch, R/P
S 105	**(Refer to J3)**	Switch, AC/DC ⚠
S 107, 109	**RFA52ZA**	Leaf Switch, Motor, FWD/REV DET
S 108, 110	**RFA75ZA**	Leaf Switch, FF/REW, PLAY
S 301	**RSH2B38YA-M**	Slide Switch, Power
S 501, 502, 503, 504, 506, 507, 508	**EVQQS405K**	Push Switch, Play/FF/REW/Stop/REM TIME/Repeat/Memory
S 505	**ESB6488**	Push Switch, Synchro Start

JACKS

Ref. No.	Part No.	Part Name & Description
J 1	**RJJD3M6Z**	Jack, MIX MIC
J 2	**RJJD7S2Z**	Jack, Headphones
J 3 (S105)	**RJJ1A3Y**	Jack, AC/DC IN ⚠
J 4	**RJF1103ZA**	Jack, Line in/out

IC PROTECTOR

Ref. No.	Part No.	Part Name & Description
IP 1	**RAHiCPN5**	IC Protector

(CD SECTION)

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description
IC101	**AN8370S**	Integrated Circuit
IC102	**AN8375S**	Integrated Circuit
IC251	**AN8290S**	Integrated Circuit
IC301	**MN6617**	Integrated Circuit
IC302	**MN6618F**	Integrated Circuit
IC303	**MN4416S-12**	Integrated Circuit
IC304	**GX573**	Integrated Circuit
IC401	**MN15845PDG**	Integrated Circuit
IC701	**AN8050S**	Integrated Circuit
IC703	**RX610**	Integrated Circuit
IC801	**AN8376S**	Integrated Circuit
IC802	**SVIPCM55HP**	Integrated Circuit
IC803	**MN6636S**	Integrated Circuit
IC805, 806	**SVIHZDN2041**	Integrated Circuit

TRANSISTORS

Ref. No.	Part No.	Part Name & Description
Q101	**2SD601-QRSTX**	Transistor
Q401	**DTA144EKT96**	Transistor
Q705	**2SB766-QRSTX**	Transistor
Q706	**2SD874-QRSTX**	Transistor

DIODES

Ref. No.	Part No.	Part Name & Description
D101	**MA151WKTX**	Diode
D102, 103	**MA721TX**	Diode
D251	**MA153TX**	Diode
D404, 405	**MA151WKTX**	Diode
D406	**MA151WKTX**	Diode

VARIABLE RESISTORS

Ref. No.	Part No.	Part Name & Description
VR101	**EVM07SX00B53**	Variable Resistor
VR102	**EVM07SX00B24**	Variable Resistor
VR103, 104	**EVM07SX00B14**	Variable Resistor
VR105	**EVM07SX00B14**	Variable Resistor
VR106	**EVM07SX00B53**	Variable Resistor
VR301	**EVM07SX00B52**	Variable Resistor

COILS

Ref. No.	Part No.	Part Name & Description
L101	**SZWD45**	Coil
L251	**SLQDNL100KT**	Coil

CRYSTAL

Ref. No.	Part No.	Part Name & Description
X301	**SZWD4-1**	Crystal 16.9344MHz

DISPLAY

Ref. No.	Part No.	Part Name & Description
LCD40	**EDD062C71A3P**	Display

SWITCHES

Ref. No.	Part No.	Part Name & Description
S801	**SSPD4**	Switch, Laser
S802	**RSH1A75ZA-U**	Switch, Open/Close
S803	**SSHD1**	Switch, Rest

■ RESISTORS & CAPACITORS

Numbering System of Resistor

Example:

ERD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value (100Ω)

ERJ	6G	C	J	2R2
Type	Wattage	Shape	Tolerance	Value (2.2Ω)

Resistor Type	Wattage	Tolerance
ERD: Carbon Resistor	10 : 1/8W	F : ±1%
ERC: Solid Resistor	25 : 1/4W	G : ±2%
ERF: Incombustible Box-Shaped Wire-Wound Resistor	50 : 1/2W 18 : 1/8W 14 : 1/4W 12 : 1/2W	J : ±5% K : ±10% M : ±20%
ERG: Metal Oxide-Film Resistor	1 : 1W 2 : 2W	
ERM: Wire-Wound Resistor	3 : 3W S1 : 1/2W	
ERO: Superstable Metal Film Resistor	S2 : 1/4W 6G : 1/10W 8G : 1/8W	
ERX: Metal-Film Resistor		
RRJ: ERJ: Chip Resistor		

※ Capacity are in microtarads (μF) unless specified otherwise, P=Pico-farads.

※ Resistance are in ohms (Ω), unless specified otherwise, 1K=1,000Ω, 1M=1,000KΩ

Numbering System of Capacitor

Example:

ECKD	1H	102	Z	F
Type	Voltage	Value (1000pF)	Tolerance	Peculiarity

ECEA	50	M	R47
Type	Voltage	Peculiarity	Value (0.47μF)

Capacitor Type	Voltage	Tolerance
ECCD: Ceramic Capacitor (Chitacon)	(ECCD, ECKD Type) 1H : 500V DC 2H : 500V DC	K : ±10% M : ±20%
ECKD: Ceramic Capacitor (Chitabari)	(ECFD Type) C : 12V DC D : 25V DC	Z : $^{+80}_{-20}$%
ECFD: Semiconductor Ceramic Capacitor	E : 50V DC (ECQ Type)	J : ±5% G : ±2%
ECE□: Electrolytic Capacitor	05 : 50WV DC 1 : 100WV DC	F : ±1%
ECS□: Tantalum Fixed Electrolytic Capacitor	(ECE, ECS Type) 0G : 4V 0J : 6.3V	C : ±0.25pF D : ±0.5pF
ECQ□: Polystyrenc Film Capacitor	1A : 10V 1C : 16V 1E : 25V 1V : 35V	F : ±1pF
ECQS: Polystyrene Film Capacitor	1H : 50V 1J : 63V 2A : 100V	
ECQS: Polypropylene Film Capacitor		
ECQV: T.F Capacitor		
ECU□: RCU□: Chip Capacitor		
ECBT: Cylindrical Ceramic Capacitor		

(MAIN SECTION)

CAPACITORS

Ref. No.	Part No.
C 1, 5, 9	**ECKT1H102MD**
C 2, 7	**ECCT1H180KC**
C 3, 13	**ECCT1H040C**
C 6	**ECCT1H120KC**
C 8	**RCBS1H470JL**
C 10, 11	**ECKT1H103ZF**
C 12, 43, 59	**RCBS1H331KB**
C 18, 30, 35, 41, 42, 57	**ECFT1C223MD**
C 21	**ECCT1H070D**
C 31	**ECEA1HU2R2B**
C 36	**ECEA0JU221B**
C 38, 40	**ECFT1C103MD**
C 45	**ECEA1CU100**
C 46, 50	**ECEA1HU010**
C 47	**ECFT1C153MD**
C 48	**ECEA1HU0R1B**
C 51	**ECQP2A102JZT**
C 56	**ECCT1H181K**
C 58	**ECEA1HUR47B**
C 101, 110, 112, 130, 132, 141, 145, 201, 210, 212, 230, 232, 241, 245, 346, 348, 351	**ECEA1HU010**
C 102	**ECCT1H221K**
C 103, 113, 147, 203, 213, 247	**RCBS1H471KB**
C 105, 115, 205, 215	**ECEA1EU3R3B**
C 106, 206	**ECEA0JU470**
C 107, 125, 207, 225	**ECFT1C333KDY**
C 108, 137, 208, 237	**RCBS1H102KB**
C 111, 211	**ECFT1C333MD**
C 116, 121, 133, 140, 216, 221, 233, 240, 307, 315	**ECEA1CU100**
C 117, 143, 217, 243, 343	**ECEA1HU0R1B**
C 118, 149, 218, 249	**ECEA1HUR33B**
C 120, 220	**ECFT1C473KD**
C 122, 222	**ECFT1C472KD**
C 123, 223	**ECQP2A332JZT**
C 126, 127, 226, 227, 375, 376	**ECEA1EU4R7**
C 128, 131, 228, 231, 338	**ECFT1C473MD**
C 135, 235	**ECQP2A183JZT**
C 136, 236, 340, 347	**ECFT1C223MD**
C 139, 144, 239, 244	**RCBS1H331KB**
C 142, 242	**RCBS1C332MX**
C 146, 246	**ECEA0JU101B**
C 148, 248, 302, 342, 365	**ECEA1AU101B**
C 150, 250	**ECEA1AU222E**
C 151, 251	**ECQV1H224JZ**
C 202	**ECKT1H471KB**
C 301	**ECQV1H474JZ3**
C 303, 308, 336, 362, 367	**ECEA1AU221B**
C 305, 368, 381, 386	**ECEA1AU471**
C 306, 316	**ECEA0JU221B**
C 310	**ECEA0JU471**
C 311	**ECFT1C153MD**
C 312, 341	**ECFT1C103MD**
C 313	**ECEA1HUR47B**
C 317, 383	**ECEA1EU471B**
C 318, 320	**ECEA1EU222**
C 332, 700, 701, 702, 703	**ECKT1H103ZF**
C 333	**ECQP2A272JZ**
C 335	**ECQP2A223JZT**
C 337	**ECKT1H332MD**
C 339, 352, 370	**ECEA1HU2R2B**
C 345, 350	**ECKT1H102MD**
C 360, 363	**ECKT1H103MD**
C 372	**ECEA1EU221**
C 377	**ECKT1H681KB**
C 382, 387	**ECKT1H333ZF**
C 385	**ECEA1AFS471E**
C 388	**ECEA1CU220B**
C 389	**ECFD1C223MD**
C 390	**RCBS1H221KB**
C 901, 909, 911, 912, 914, 922, 924, 925	**ECEA1HKS010L**
C 902, 915	**ECUV1H223MD**
C 903, 916	**ECEA1HKSR33**
C 904, 917	**RCUV1H682KB**
C 905, 918	**ECEA1HKS0R1**
C 906, 919	**RCUV1H222MD**
C 907, 920	**ECUV1E333MD**
C 908, 921	**ECUV1E683MD**
C 910, 923	**RCUV1E103MD**
C 913	**ECEA0JKS101i**

RESISTORS

Ref. No.	Part No.
R 1, 2	**ERDS2TJ101T**
R 3	**ERDS2TJ100**
R 4	**ERDS2TJ394T**
R 6	**ERDS2TJ824**
R 7	**ERDS2TJ331**
R 8	**ERDS2TJ221**
R 13	**ERDS2TJ470T**
R 16	**ERDS2TJ222**
R 17	**ERDS2TJ123T**
R 20	**ERDS2TJ560T**
R 21	**ERDS2TJ472**
R 22, 23	**ERDS2TJ821**
R 24	**ERDS2TJ104T**
R 25	**ERDS2TJ822**
R 26, 27	**ERDS2TJ392T**
R 28	**ERDS2TJ102**
R 101, 116, 136, 201, 216, 236, 311, 370, 379, 398	**ERDS2TJ104T**
R 102, 134, 148, 202, 234, 248, 303, 306, 312, 337, 363	**ERDS2TJ101T**
R 103, 145, 203, 245, 397	**ERDS2TJ392**
R 104, 110, 204, 210	**ERDS2TJ153T**
R 105, 127, 133, 137, 144, 205, 227, 233, 237, 244, 302, 339, 346, 357, 360, 368, 373, 392	**ERDS2TJ472**
R 107, 117, 138, 207, 217, 238, 321	**ERDS2TJ152**
R 108, 140, 208, 240, 307, 308, 338, 343, 355, 361, 386	**ERDS2TJ222**
R 111, 128, 142, 211, 228, 242, 314, 332, 380, 384	**ERDS2TJ102**
R 112, 212, 310, 351, 362, 371, 372, 378, 383, 388	**ERDS2TJ103T**
R 113, 213	**ERDS2TJ182**
R 115, 122, 215, 222	**ERDS2TJ683**
R 118, 218	**ERDS2TJ474**
R 119, 219	**ERDS2TJ272**
R 120, 151, 220, 251, 358, 393, 399	**ERDS2TJ151**
R 121, 221, 342, 352, 395	**ERDS2TJ122T**
R 123, 223	**ERDS2TJ274**
R 125, 225, 335	**ERDS2TJ473**
R 126, 147, 226, 247, 341, 345, 348, 382, 391	**ERDS2TJ332**
R 131, 143, 231, 243	**ERDS2TJ333**
R 132, 232, 347, 353	**ERDS2TJ684**
R 135, 235	**ERDS2TJ821**
R 146, 246, 387, 390	**ERDS2TJ223**
R 149, 249	**ERDS2TJ682**
R 150, 250	**ERDS2TJ2R2T**
R 301, 366, 502	**ERDS2TJ221**
R 305	**ERD25VJ106T**
R 309	**ERD25FVJ100T**
R 320	**ERDS2TJ123T**
R 340	**ERD25FVJ3R3T**
R 350, 356	**ERDS2TJ470T**
R 365, 367, 396, 501	**ERDS2TJ471**
R 375	**ERDS2TJ154T**
R 381	**ERD25FVJ1R0T**
R 385	**ERDS2TJ393**
R 500	**ERD25VJ102T**
R 914, 915	**RRJ6GCJ182TE**

(CD SECTION)

RESISTORS

Ref. No.	Part No.
R101	**ERJ6GEYJ102C**
R102	**ERJ6GMYJ102W**
R103	**ERJ6GEYJ822V**
R104	**ERJ6GMYJ682W**
R105, 106	**ERJ6GEYJ222V**
R107	**ERJ6GEYJ682V**
R108	**ERJ6GEYJ822V**
R109	**ERJ6GEYJ154V**
R110, 111	**ERJ6GEYJ222V**
R112	**ERJ8GEYJ100V**
R113, 114	**ERJ6GMYJ102W**
R115	**ERJ6GEYJ102C**
R116	**ERJ6GEYJ223V**
R117	**ERJ6GEYJ472V**
R118	**ERJ6GEYJ332V**
R119	**ERJ8GEYJ154V**
R131, 132	**ERJ6GEYJ472V**
R133	**ERJ6GEYJ222V**
R134	**ERJ6GEYJ473V**
R135	**ERJ6GEYJ681V**
R136	**ERJ6GEYJ223V**
R137	**ERJ6GEYJ124V**
R138, 139	**ERJ8GCYJ2R7W**
R140	**ERJ6GEYJ223V**
R141	**ERJ6GEYJ681V**
R142	**ERJ6GEYJ473V**
R143	**ERJ6GEYJ222V**
R144	**ERJ6GEYJ152V**
R145	**ERJ6GEYJ224V**
R146	**ERJ6GEYJ104V**
R147	**ERJ6GMYJ334W**
R148	**ERJ6GEYJ183V**
R149	**ERJ6GMYJ473W**
R150	**ERJ6GEYJ473V**
R151	**ERJ6GEYJ472V**
R152	**ERJ6GEYJ473V**
R251	**ERJ6GMYJ562**
R252	**ERJ6GMYJ473W**
R253	**ERJ6GMYJ683W**
R254	**ERJ6GMYJ473W**
R255	**ERJ6GMYJ563W**
R256	**ERJ6GEYJ223V**
R257	**ERJ8GEYJ2R2V**
R303	**ERJ6GEYJ152V**
R304	**ERJ6GEYJ561V**
R401, 402	**ERJ6GEYJ222V**
R403	**ERJ6GEYJ222V**
R404, 405	**ERJ6GEYJ472V**
R407, 408	**ERJ6GEYJ472V**
R409, 410	**ERJ6GEYJ102C**
R411	**ERJ6GEYJ102C**
R413	**ERJ6GEYJ103V**
R801, 802	**ERJ6GEYJ4R7V**
R803, 804	**ERJ6GEYJ162V**
R805, 806	**ERJ6GEYJ152V**
R807, 808	**ERJ6GEYJ102C**
R809, 810	**ERJ6GEYJ102C**
R821	**ERJ6GMYJ473W**
R822	**ERJ6GEYJ473V**
R832, 833	**ERJ6GEYJ102C**
R834, 835	**ERJ6GEYJ223V**

CAPACITORS

Ref. No.	Part No.
C102	**RCUV1H222KB**
C103	**RCUV1H102KB**
C104	**RCUX1H102K**
C105	**RCUV1H681K**
C106, 107	**RCUV1H102KB**
C108	**ECEA1AKS470**
C109	**RCUV1H220KC**
C110, 111	**RCUV1H271KC**
C112	**RCUV1E104ZF**
C113	**ECEA0JKS101I**
C114	**ECEA1HSN010L**
C115, 116	**RCUV1E104ZF**
C117	**RCUV1H681K**
C118	**ECEA0JSN220I**
C119	**ECEA1HKS010L**
C120	**RCUV1H471KC**
C121	**ECUV1E333MB**
C122	**RCUV1H682KB**
C123	**RCUV1H182KB**
C124	**ECSE1VY334R**
C125	**RCUV1E104ZF**
C128, 129	**RCUV1H102KB**
C141	**ECUV1E333MB**
C142	**ECEA1HSNR47L**
C143	**RCUV1E183KB**
C144	**RCUV1H392KB**
C145	**RCUV1E223KB**
C146	**RCUV1E153KB**
C147	**RCUV1H561KB**
C148	**RCUV1H822KB**
C149	**ECEA1ESN3R3I**
C150	**ECUV1E223KB**
C151	**RCUV1H152KB**
C152	**ECUV1E333KB**
C153	**ECEA1ESN3R3I**
C154	**ECUV1E223KB**
C155	**ECSE1ET155R**
C156	**ECSE1AT225SR**
C157	**ECSE0JT336**
C158	**ECUV1H473KB**
C159	**ECSE0JT336**
C251	**RCUV1E104ZF**
C252	**ECUX1H152KB**
C253	**ECUX1E273KB**
C254	**ECUV1E223KB**
C255	**ECSE1CY474L**
C256	**ECEA1CKS330I**
C257	**RCUX1E104ZF**
C258	**ECEA1CSN220L**
C259	**ECEA1CSN220I**
C260	**ECEA1CSN220L**
C301	**ECEA1VSN2R2I**
C302	**RCUX1H103ZF**
C303	**RCUV1H100DC**
C304	**RCUV1H100DC**
C306	**RCUV1H103ZF**
C308	**ECUV1C105ZF**
C309, 311	**RCUV1E104ZF**
C401	**RCUV1H103ZF**
C402	**RCUV1E104ZF**
C701, 702	**ECSF1AE226**
C703	**ECSE0JT225SG**
C704	**ECSE09T225R5**
C705	**ECSE1AT155R**
C706, 707	**ECSE0JT225SG**
C712	**ECEA0JKS220I**
C714	**ECEA0JKS101I**
C717	**ECEA0JKS101**
C801, 802	**ECEA0JKS470I**
C805, 806	**RCUV1H331KC**
C807, 808	**ECEA0JSN220I**
C813	**RCUV1H103ZF**
C814, 815	**RCUV1E104ZF**
C818	**RCUV1E104ZF**
C819, 820	**ECUV1H102KC**
C821, 822	**ECSE0JT106R**

GAD
H.Y M Printed in Japan Ⓗ

ORDER NO. GAD8701621S1
A6

Service Manual

Supplement

Radio Cassette

Stereo Radio Cassette Recorder

RX-FD80

(Black)

COMPACT
disc
DIGITAL AUDIO

DIGITAL

This is the Service Manual
for the following area.
[M] ··· For U.S.A.

- Please use this manual together with the service manual for model RX-FD80 [M] order No. GAD8611621C1.
- This service manual indicates the main differences between; model RX-FD80 [M] and supplement.

CHANGE

■ PARTS COMPARRISON TABLE:

Ref. No.	Description	Part Number		Remarks
		RX-FD80 [M] (Original)	**RX-FD80 [M] (Supplement)**	
M55	Lever, Rec Button	RFS671ZA	**RFY760ZA**	
M95	Lever, Control	RFY745ZA	**RFY757ZA**	
M97	Lever, Stop	RFY746ZA	**RFY758ZA**	
M112	Lever, Operation	RFY747ZA	**RFY759ZA**	
M228	Screw ⊕2.3 × 5 (Rec Change Lever M'tg)	RFE346ZA	**RFE349ZA**	

CORRECTION

(Original)

Ref. No.	Part Name & Description	Part. No.	Remarks
S801	Switch, Laser	SSPD4	
S802	Switch, Open/Close	RSH1A75ZA-U	

⬇

(Supplement)

Ref. No.	Part Name & Description	Part. No.	Remarks
S801	**Switch, Open/Close**	**RSH1A75ZA-U**	
S802	**Switch, Laser**	**SSHD1**	

Panasonic®

Matsushita Service Company
50 Meadowland Parkway,
Secaucus, New Jersey 07094

Panasonic Hawaii Inc.
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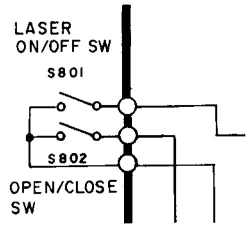
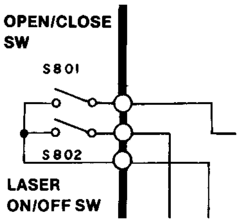
Ave. 65 De Infanteria, KM 9.7
Victoria Industrial Park
Carolina, Puerto Rico 00630

SCHEMATIC DIAGRAM (CD PLAYER SECTION)


LASER
ON/OFF SW
S801
S802
OPEN/CLOSE
SW


OPEN/CLOSE
SW
S801
S802
LASER
ON/OFF SW

Notes:

1. S801 : Laser ON/OFF switch in "**OFF**" position.
2. S802 : Open/Close switch in "**OFF**" position.

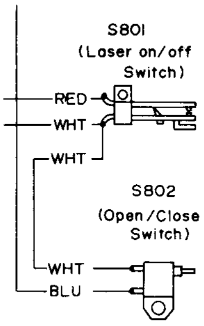
(Original)

Notes:

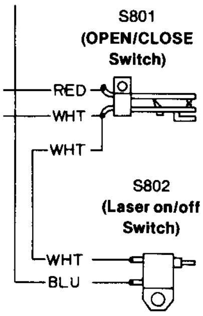
1. S801 : **Open/Close** switch in "**OFF**" position.
2. S802 : **Laser ON/OFF** switch in "**OFF**" position.

(Supplement)

PRINTED CIRCUIT BOARD

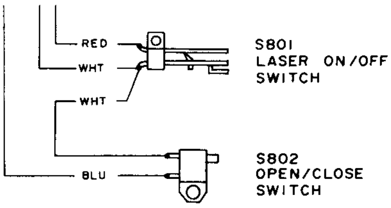

S801
(Laser on/off
Switch)
RED
WHT
WHT
S802
(Open/Close
Switch)
WHT
BLU

(Original)

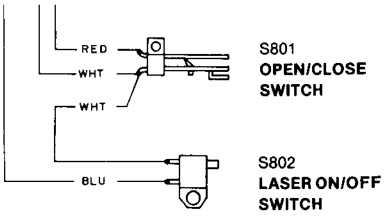

S801
(OPEN/CLOSE
Switch)
RED
WHT
WHT
S802
(Laser on/off
Switch)
WHT
BLU

(Supplement)

WIRING CONNECTION DIAGRAM


RED
WHT
WHT
BLU
S801
LASER ON/OFF
SWITCH
S802
OPEN/CLOSE
SWITCH

(Original)


RED
WHT
WHT
BLU
S801
OPEN/CLOSE
SWITCH
S802
LASER ON/OFF
SWITCH

(Supplement)

Adjustment Manual and Power-on Checking Method

■ MEASUREMENTS AND ADJUSTMENTS

Caution:

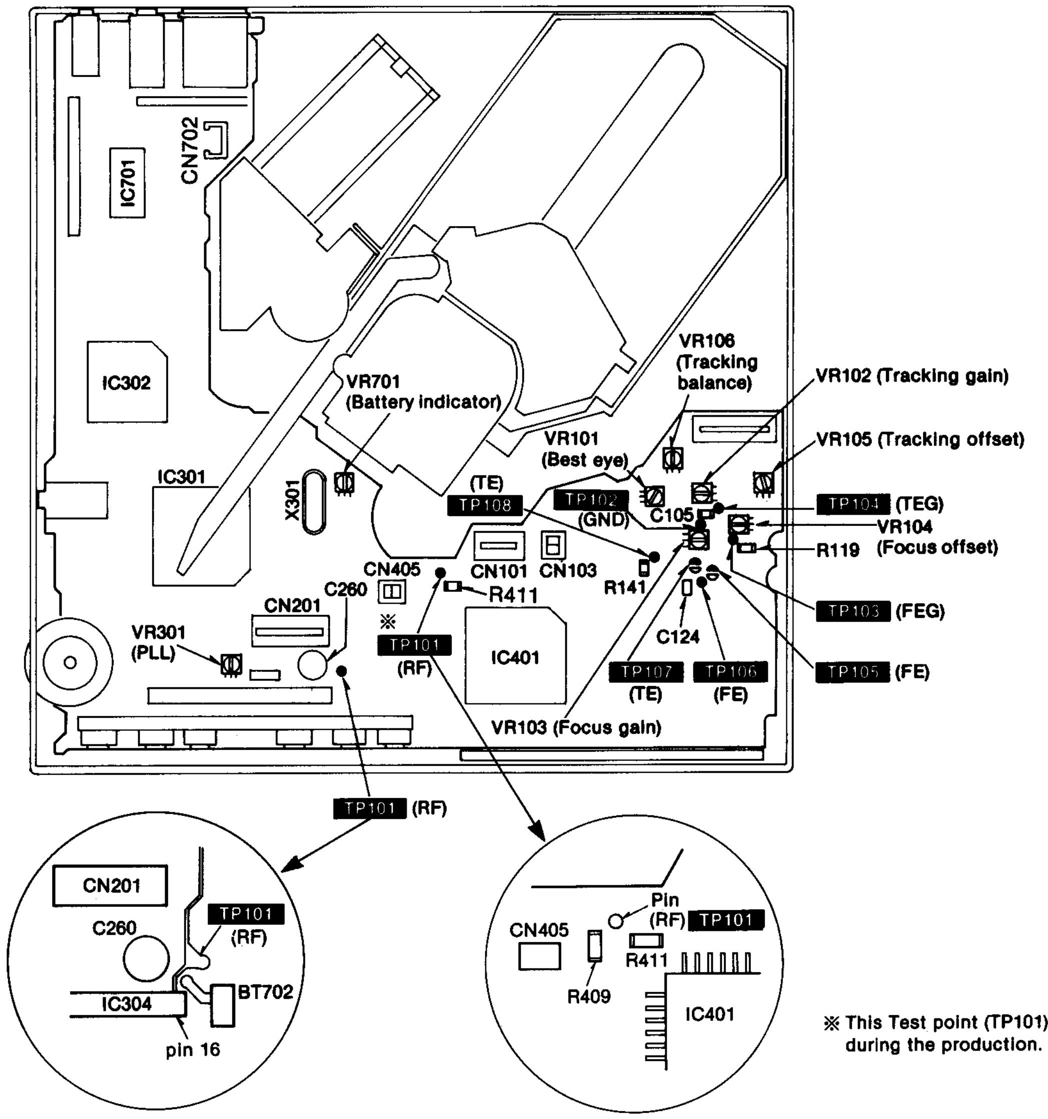
- It is very dangerous to look at or touch the laser beam. (Laser radiation is invisible.) With the unit turned "on", laser radiation is emitted from the pickup lens. Avoid exposure to the laser beam, especially when performing adjustments.

ELECTRICAL ADJUSTMENT

Measuring Instruments and Special Tools

- Servo gain adjuster (SZZP1017F)
- Test disc
  - Test disc (SZZP1014F) old type
  - Test disc (SZZP1014F) new type
  - Inspection test disc (SZZP1054C)
  - Uneven disc (SZZP1056C)
  - Black band disc (SZZP1057C)
- Ordinary disc
- Short lead wires
- Conversion connector (SZZP1032F)
- Connector with lead wire (SZZP1074C)
- Filter for tracking offset balance (SZZP1060C)
- Power supply connector (SZZP1077C)
- Two-channel oscilloscope (with trigger) of 30 MHz or over
- Low frequency oscillator
- DC power supply unit

Adjustment Points


IC701
CN702
IC302
IC301
X301
VR701 (Battery indicator)
VR106 (Tracking balance)
VR102 (Tracking gain)
VR105 (Tracking offset)
VR101 (Best eye)
(TE)
TP108
TP102 (GND)
C105
TP104 (TEG)
VR104
R119 (Focus offset)
CN405
CN101
CN103
R141
C260
R411
CN201
VR301 (PLL)
※
TP101 (RF)
IC401
C124
TP107 (TE)
TP106 (FE)
TP103 (FEG)
TP105 (FE)
VR103 (Focus gain)
TP101 (RF)
CN201
C260
TP101 (RF)
IC304
BT702
pin 16
CN405
Pin (RF) TP101
R411
R409
IC401

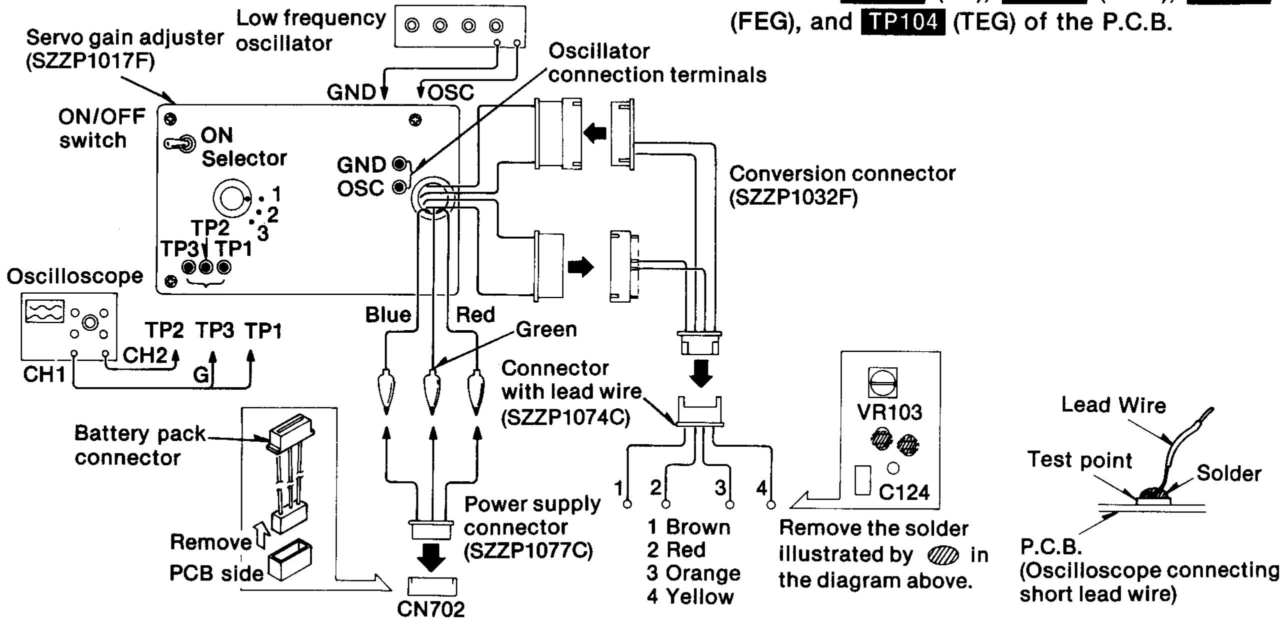
※ This Test point (TP101) was added during the production.

Preparation for Adjustments

1. Installation of servo gain adjuster (SZZP1017F).
   a) Be sure to turn off the power switch of the player.
   b) Remove the battery pack supply connector (CN702) and install the **power supply connector (SZZP1077C)** instead. Connect the clips of servo gain adjuster to the power supply connector lead wires, matching the colors of the lead wires.

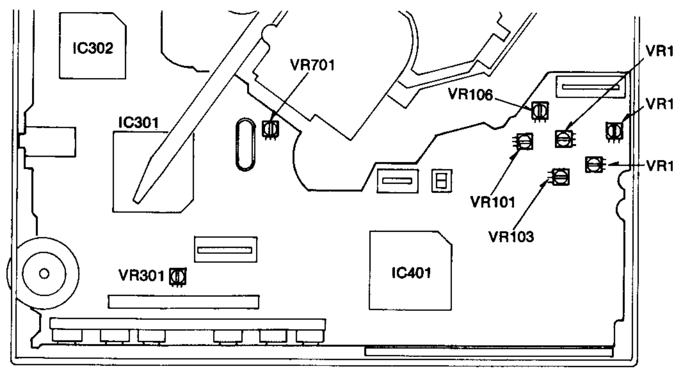
Note: When connecting the clips to the lead wires, make sure that the wires do not touch each other.

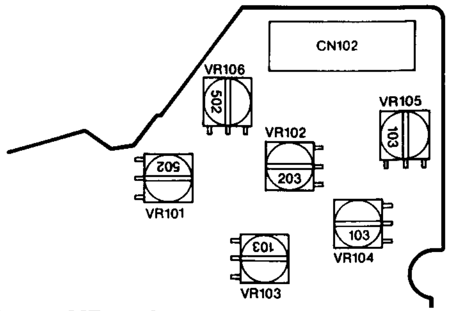
   c) Connect the connector of servo gain adjuster to the **conversion connector (SZZP1032F)** and the **connector with lead wire (SZZP1074C)**.
   d) Remove the solder shorted part of focus and tracking gain circuit. (See diagram below.)
   e) Solder the lead wires of the **connector with lead wire (SZZP1074C)** to the test points. (TP105 to Red, TP106 to Brown, TP107 to Yellow, TP108 to Orange)
2. Solder the oscilloscope connecting short lead wires to TP101 (RF), TP102 (GND), TP103 (FEG), and TP104 (TEG) of the P.C.B.


Servo gain adjuster (SZZP1017F)
Low frequency oscillator
GND
OSC
Oscillator connection terminals
ON/OFF switch
ON
Selector
1
2
3
GND
OSC
TP2
TP3
TP1
Conversion connector (SZZP1032F)
Oscilloscope
CH1
CH2
TP2 TP3 TP1
G
Blue
Red
Green
Connector with lead wire (SZZP1074C)
VR103
C124
Lead Wire
Test point
Solder
Battery pack connector
Remove
PCB side
Power supply connector (SZZP1077C)
CN702
1 2 3 4
1 Brown
2 Red
3 Orange
4 Yellow
Remove the solder illustrated by ▨ in the diagram above.
P.C.B. (Oscilloscope connecting short lead wire)

Adjustment Procedure

- **Step 1:** Temporarily set each VR (VR101~106, VR301, and VR701) to its mechanical center as shown below.
- **Step 2:** Best eye (PD balance) adjustment.
- **Step 3:** Focus gain adjustment.
- **Step 4:** Tracking gain adjustment.
- **Step 5:** Focus offset adjustment.
- **Step 6:** Tracking offset adjustment.
- **Step 7:** Tracking balance adjustment.
- **Step 8:** PLL adjustment.
- **Step 9:** Check of operation after adjustment.
- **Step 10:** Battery indicator adjustment.


IC302
VR701
VR102
IC301
VR106
VR105
VR104
VR101
VR103
VR301
IC401

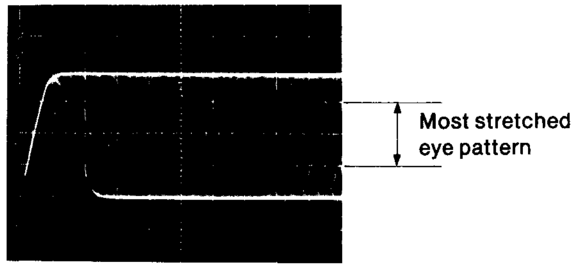

CN102
VR106
502
VR105
103
VR102
203
209
VR101
103
VR104
103
VR103

Setting a VR to its mechanical center:

1. Look at the VR with its terminals pointing towards you.
2. Align the VR's groove so that it is vertical and the engraved three-digit number is on the left side.

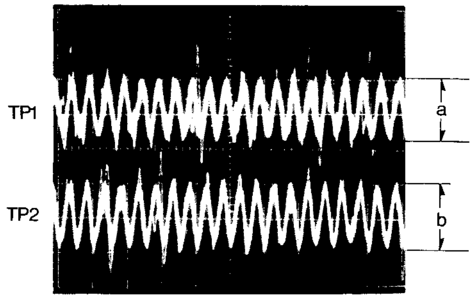
BEST EYE (PD BALANCE) ADJUSTMENT

1. Set the selector switch of the servo gain adjuster to "2" and ON/OFF switch to "ON".
2. Connect CH1 of the oscilloscope to TP101 (+) and TP102 (−) of the P.C.B.
   Oscilloscope setting: VOLT 200mV
   SWEEP.......0.5µsec.
   INPUT.........AC
3. Insert a test disc (**SZZP1014F or SZZP1054C**) and turn on the power switch of the player.
4. Set the player to the play mode.
5. Adjust **VR101** so that the eye pattern of RF signal is stretched to maximum.
6. Turn off the power switch of the player.



FOCUS GAIN ADJUSTMENT

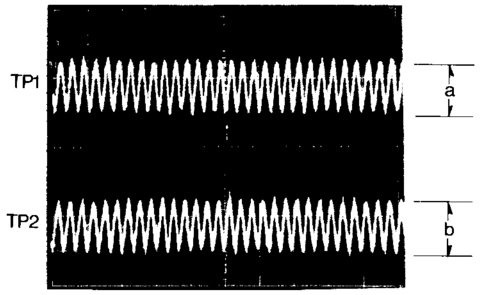
1. Set the low frequency oscillator to a frequency of **1kHz** and an output voltage of **150mVp-p**, Then connect the oscillator to the **OSC** (+) and **GND** (−) terminals of the servo gain adjuster.
2. Connect CH1 and CH2 of the oscilloscope to **TP1** and **TP2** of the servo gain adjuster. (**TP3** is the ground terminal.)
   Oscilloscope setting: VOLT ....100mV (both channels)
   SWEEP.......1msec.
   INPUT.........AC
3. Insert a test disc (**SZZP1014F or SZZP1054C**) and turn on the power switch of the player.
4. Set the player to the play mode.
5. Set the selector switch of the servo gain adjuster from "2" **to** "1".



6. 1kHz signals will be displayed on the oscilloscope. Adjust **VR103** until the waveform amplitudes of **both channels are equal**.
7. Shift the selector switch of the servo gain adjuster from "1" **to** "2".
8. Turn off the power switch of the player.

TRACKING GAIN ADJUSTMENT

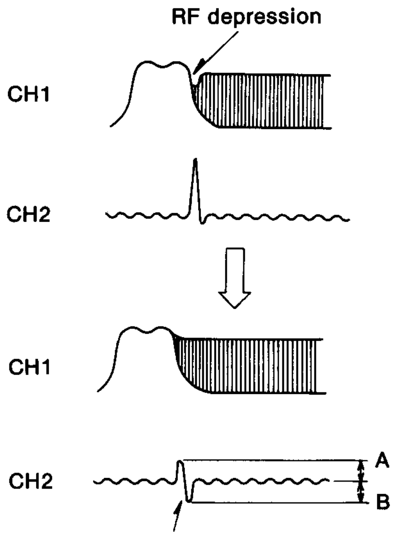
1. Set the low frequency oscillator to a frequency of **1.5kHz** and an output voltage of **150mVp-p**, Then connect the oscillator to the **OSC** (+) and **GND** (−) terminals of the servo gain adjuster.
2. Connect CH1 and CH2 of the oscilloscope to **TP1** and **TP2** of the servo gain adjuster. (**TP3** is the ground terminal.)
   Oscilloscope setting: VOLT ....100mV (both channels)
   SWEEP.......1msec.
   INPUT.........AC
3. Insert a test disc (**SZZP1014F or SZZP1054C**) and turn on the power switch of the player.
4. Set the player to the play mode.
5. Set the selector switch of the servo gain adjuster from "2" **to** "3".
6. 1.5kHz signals will be displayed on the oscilloscope. Adjust **VR102** until the waveform amplitudes of **both channels are equal**.



7. Shift the selector switch of the servo gain adjuster from "3" **to** "2".
8. Turn off the power switch of the player.
9. Carefully disconnect the servo gain adjuster from the power supply connector (**SZZP1077C**) and the connector with lead wire (**SZZP1074C**). Remove the connector with lead wire from the P.C.B. and replace the power supply connector with the battery pack supply connector (CN702).

FOCUS OFFSET ADJUSTMENT

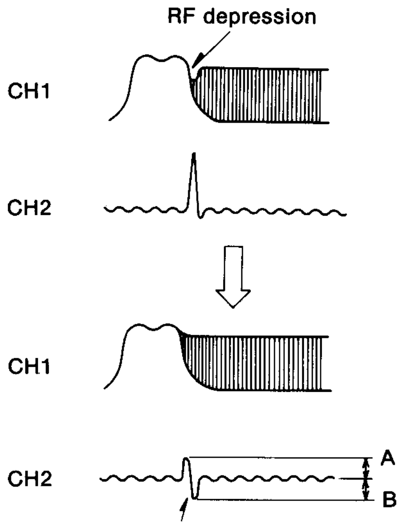
1. Connect CH1 of the oscilloscope to the TP101 (+) and TP102 (−). Connect CH2 to the TP103 (+) and TP102 (−) of the P.C.B.
   Oscilloscope setting: VOLT 500mV (CH1)
   200mV (CH2)
   SWEEP.......0.5msec.
   INPUT.........AC (CH1)
   DC (CH2)
   MODE.........NORM
   (Triggering via CH1)
2. Insert a test disc (**SZZP1057C, Black band disc**) and turn on the power switch of the player.
3. Set the player to the play mode.
4. Check the waveforms of CH1 and CH2 on the oscilloscope and adjust **VR104**, so that the waveform around the triggering point becomes as shown in the illustration.



Minimize the amplitude or make A=B.

TRACKING OFFSET ADJUSTMENT

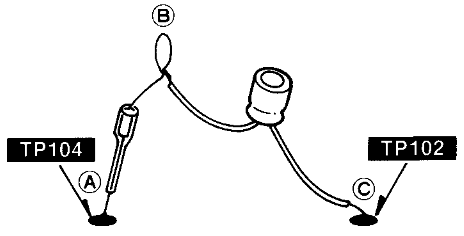
1. Connect CH1 of the oscilloscope to the TP101 (+) and TP102 (−). Connect the CH2 to the TP104 (+) and TP102 (−) of the P.C.B.
   Oscilloscope setting: VOLT 500mV (CH1)
   200mV (CH2)
   SWEEP.......0.5msec.
   INPUT.........AC (CH1)
   DC (CH2)
   MODE.........NORM
   (Triggering via CH1)
2. Insert a test disc (**SZZP1057C, Black band disc**) and turn on the power switch of the player.
3. Set the player to the play mode.
4. Check the waveforms of CH1 and CH2 on the oscilloscope and adjust **VR105**, so that the waveform around the triggering point becomes as shown in the illustration.



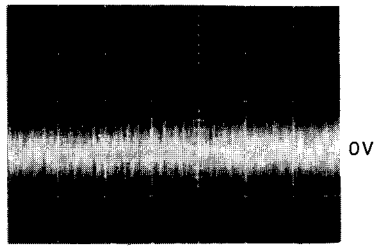
Minimize the amplitude or make A=B.

TRACKING OFFSET BALANCE ADJUSTMENT

1. Remove the short lead wires TP104 and TP102 connected during the preparation for adjustment. Solder the **filter for tracking balance (SZZP1060C)** to the test point as shown.
2. Connect CH1 of the oscilloscope to Ⓑ (+) and Ⓒ (−) of the filter for tracking balance.
   Oscilloscope setting: VOLT 20mV
   SWEEP.......1msec.
   INPUT.........DC
3. Insert a **test disc** (**SZZP1014F or SZZP1054C**) and turn on the power switch.
4. Set the player to the play mode.
5. Adjust **VR106** so that the voltage at the waveform center of the oscilloscope is **0±10mV**.



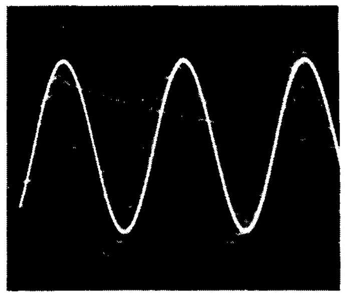
(Filter for tracking balance)



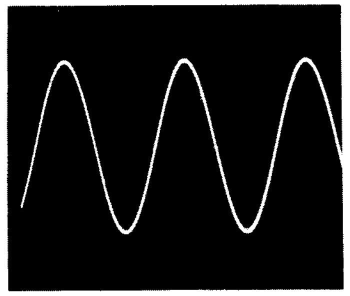
PLL ADJUSTMENT

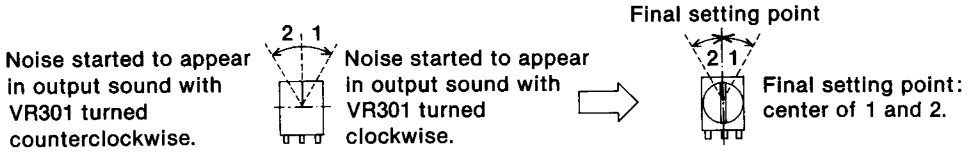
1. Connect CH1 of the oscilloscope to the **line out terminal** (either of Lch or Rch) and **ground.**
   Oscilloscope setting: VOLT 1V
   SWEEP.......1msec.
   INPUT.........DC
2. Insert a **test disc (SZZP1054C)** and turn on the power switch.
3. Play **Track 6 (wedge 0.7mm)** of the test disc.
4. Check the waveform displayed on the oscilloscope and adjust **VR301** in the following steps.
   Step 1. Turn **VR301** clockwise slowly and observe the point at which the waveform on the oscilloscope begins to be disturbed.
   Step 2. Turn **VR301** counterclockwise slowly and observe the point at which the waveform on the oscilloscope begins to be disturbed.
   Step 3. Set **VR301** in the middle between the points observed in the above steps "1" and "2".
5. Turn off the power switch of the player.

• NG



• OK




Noise started to appear in output sound with VR301 turned counterclockwise.
2
1
Noise started to appear in output sound with VR301 turned clockwise.
Final setting point
2
1
Final setting point: center of 1 and 2.

REMOVAL OF TEST EQUIPMENT

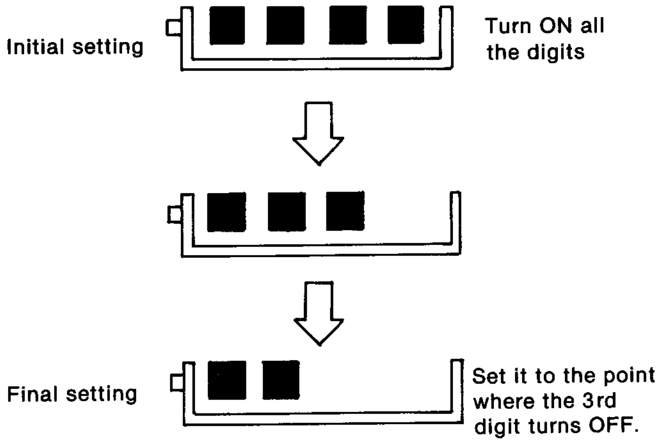
1. Remove the lead wires soldered to the test points.
2. Solder the open portions of focus servo and tracking servo circuits.

CHECK OF PLAY OPERATION AFTER ADJUSTMENT

- **Check of skip search**
  1. Play an ordinary disc.
  2. Press the skip button and verify skip search operation (forward and reverse).
- **Check of manual search**
  1. Play an ordinary disc.
  2. Press the manual search button and verify that smooth manual search can be performed at low and high speeds (forward and reverse).
- **Check of playability**
  1. Play the test disc (SZZP1054C).
  2. Play the track 6 (wedge 0.7mm) and verify that there is no skip sound or noise.
  3. Play the track 13 (black dot 0.7mm) and verify that there is no skip sound or noise.

BATTERY INDICATOR ADJUSTMENT

1. Be sure to remove the AC adaptor from the player.
2. Remove the battery pack power supply connector CN702 and install the **power supply connector (SZZP1077C)** instead.
3. Connect DC power supply units to the power supply connector.
   Red lead .... +5.9V
   Green lead .... Ground
   Blue lead .... −7.2V
4. Re-check the voltage from **DC power supply unit** and adjust it to **+5.9V.**
5. Turn on all the digits of the battery indicator by **VR701**, and turn them off in order. Stop turning **VR701** when the 3rd digit turns off coming down to the 2nd digit.



OPTICAL PICKUP ADJUSTMENT

Measuring Instruments and Special Tools

- Two-channel oscilloscope (with trigger) of 30MHz or over
- Test disc
  Test disc (SZZP1014F) old type
  Test disc (SZZP1014F) new type
  Inspection test disc (SZZP1054C)
- Hexagonal wrench (2mm)
- Screw lock paint (RZZ0L01)
- Lead wires

Adjustment Procedure and Adjustment Points

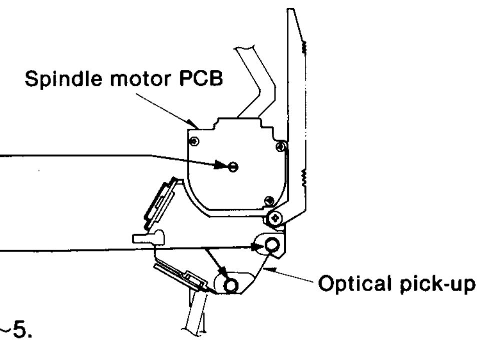
- If the optical pickup is replaced, adjust it according to the following procedure.

Step 1: Temporarily set each VR (VR101~VR106, VR301, and VR701) to its mechanical center. ...See page 2.

Step 2: Turntable height adjustment.

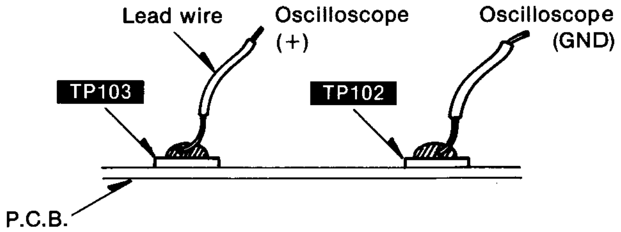
Step 3: Mechanical adjustment.

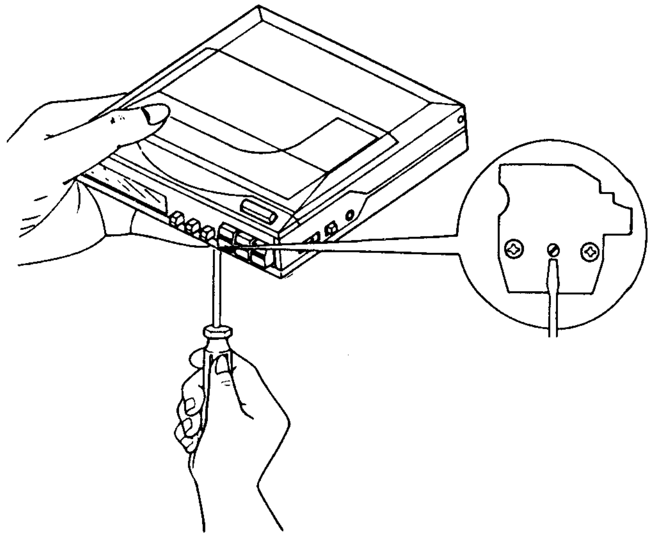
Step 4: Electrical adjustment. ...See pages 1~5.

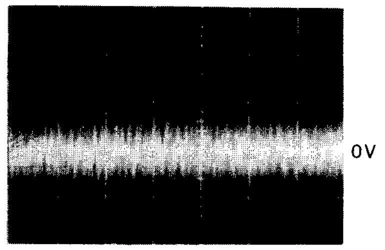


TURNTABLE HEIGHT ADJUSTMENT

1. Turn off the power switch of the player.
2. Solder the lead wires to TP103 (FEG) and TP102 (GND) of the P.C.B. so that the probe of oscilloscope can be connected.
3. Connect CH1 of the oscilloscope to the TP103 (+) and TP102 (−) of the lead wires.
   Oscilloscope setting: VOLT 200mV
   SWEEP.......5msec.
   INPUT.........DC
4. Set the oscilloscope to DC zero balance.
5. Insert a **test disc (SZZP1014F or SZZP1054C)** and turn on the power switch of the player.
6. Carefully hold the player with the top face up.
7. Set the player to the play mode.
8. Turn the **adjusting screw** at the bottom of the spindle motor drive P.C.B. with a flat screwdriver so that the waveform is balanced at **0±50mV.**
9. Turn off the power switch of the player.
10. After the adjustment, apply **screw lock paint (RZZ0L01)** to the adjusting screw.

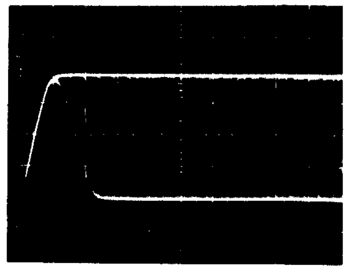






MECHANICAL ADJUSTMENT

1. Connect CH1 of the oscilloscope to TP101 (+) and TP102 (−) of the P.C.B.
   Oscilloscope setting: VOLT 200mV
   SWEEP.......0.5μsec.
   INPUT.........AC
2. Insert a **test disc (SZZP1056C)** and turn on the power switch of the player.
3. Carefully hold the player with the top face up.
4. Monitoring the RF signal on the oscillosocpe, adjust the **two adjusting screws** alternately so that the vertical fluctuation of RF signal is minimized and the eye pattern is most stretched.
5. Turn off the power switch of the player.
6. After the adjustment, apply **screw lock paint (RZZ0L01)** to the two adjusting screws.

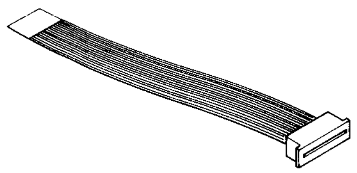


■ POWER-ON CHECKING METHOD

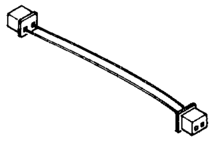
- To check the parts, voltages, etc, on the back of the P.C.B., perform the following procedure.

Special Tools

- FPC extension cord (SZZP1075C)

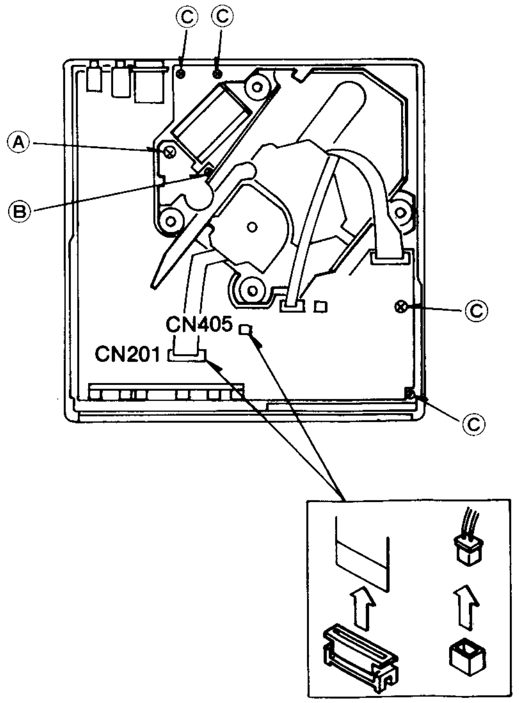


- Extension connector (SZZP1076C)

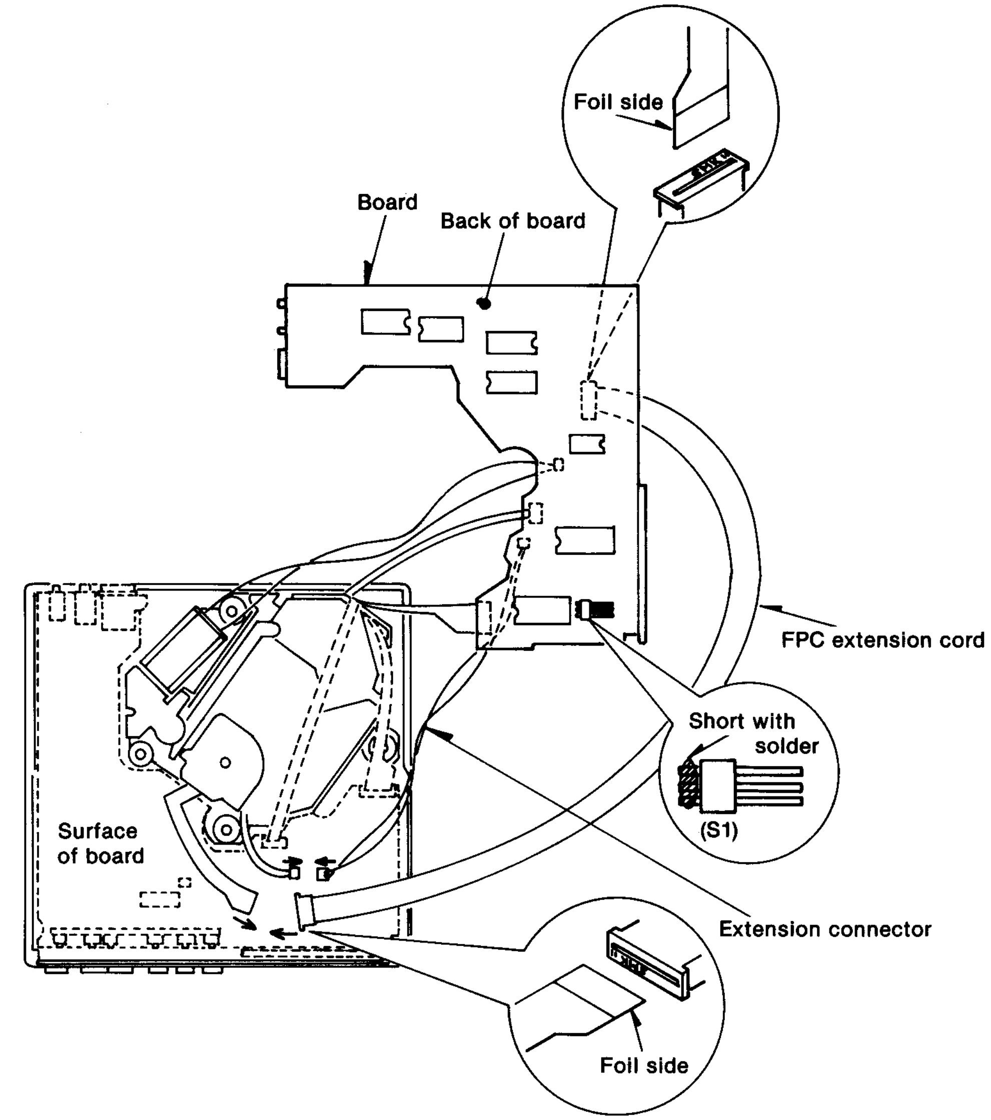


Procedure

1. Remove the bottom cover.
2. When the optical pickup is at the inner periphery, the P.C.B. cannot be removed because of the rack gear. So, remove the traverse motor setscrews (Ⓐ, Ⓑ) and shift the optical pickup to the outer periphery, then secure the traverse motor with the screws.
3. Remove the spindle board FPC (CN201) and inner periphery detection switch connector (CN405).
4. Remove the screws Ⓒ which fasten the P.C.B.



5. Remove the P.C.B. and place it in the position shown, then connect the FPC extension cord and extension connector. (Be sure to connect the FPC extension cord correctly.)
6. Solder the terminals of switch (S1) to short them.
7. Proceed to check the P.C.B. as required.



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ORDER NO. GAD8702017 S1
A6

Service Manual

Supplement

Radio Cassette

RX-FD80

(Black)

Stereo Radio Cassette Recorder

COMPACT
disc
DIGITAL AUDIO

DIGITAL

This is the Service Manual for the following areas.

$\boxed{M}$ …For U.S.A.

$\boxed{C}$ …For Canada.

- Please use this manual together with the service manual for model No.RX-FD80 $\boxed{M}$ order No. GAD8611621C1 and RX-FD80 $\boxed{C}$ order No. GAD8701503A1.
- This Service Manual indicates the main differences between; Original RX-FD80 $\boxed{M}$ RX-FD80 $\boxed{C}$ and RX-FD80 $\boxed{M}$ $\boxed{C}$ supplement.

ADDITION OF PARTS

■ **PARTS COMPARISON TABLE**

Ref. No.	Description	Part Number		Remarks
		RX-FD80 $\boxed{M}$ RX-FD80 $\boxed{C}$ (Original)	RX-FD80 $\boxed{M}\boxed{C}$ (Supplement)	
K92	Angle, Mechanism	RMX340ZA	————	
K133	Spacer	————	**RMX340ZA**	**Added**
K131	Clumper	————	**RHR1348ZA**	**Added**
K132	Spring	————	**RUW122ZB**	**Added**

CORRECTION OF PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
K87	RUB 9025ZA	Lever, R/P	
K94	XSN3+4	Screw⊕ 3x4 (Mechanism Angle)	

⬇

K87	RUB9025ZA	**Lever Ass'y, R/P**	
K94	XSN3+4	**Screw⊕ 3x4 (Chassis Direction)**	

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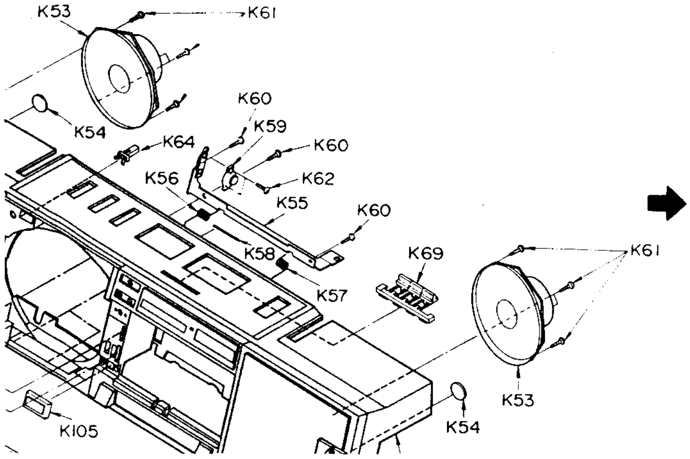
Carolina, Puerto Rico 00630

■ CABINET PARTS LOCATION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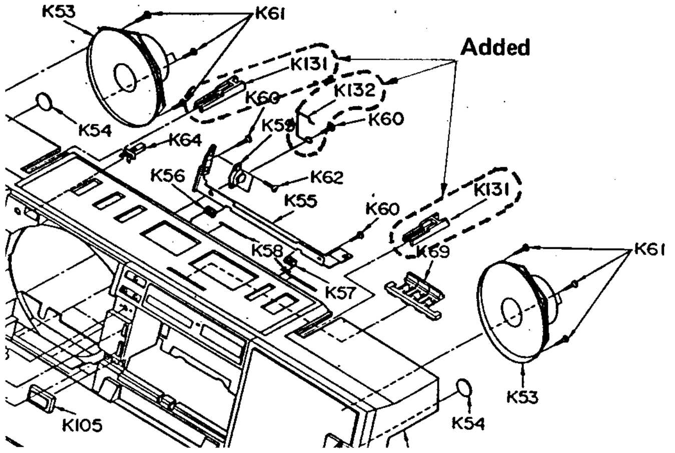
K54
K105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K61
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K131
K60
K132
K60
K54
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K61
K57
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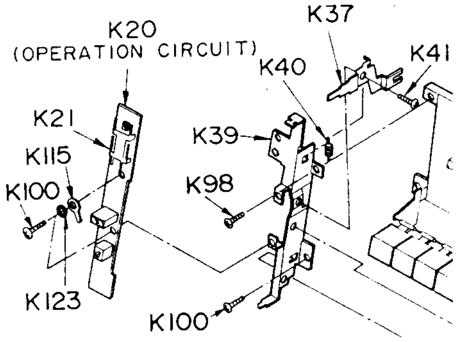
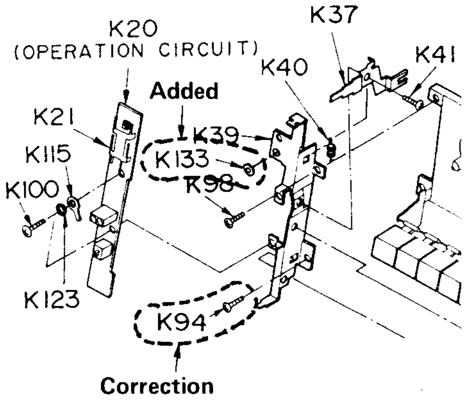
K105
K54


K20
(OPERATION CIRCUIT)
K37
K40
K41
K21
K39
K115
K98
K100
K123
K100


K20
(OPERATION CIRCUIT)
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K40
K41
Added
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K133
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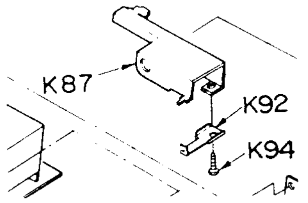
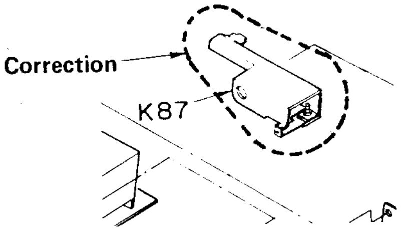
K94
Correction




Correction
K87

(Original)

(Supplement)